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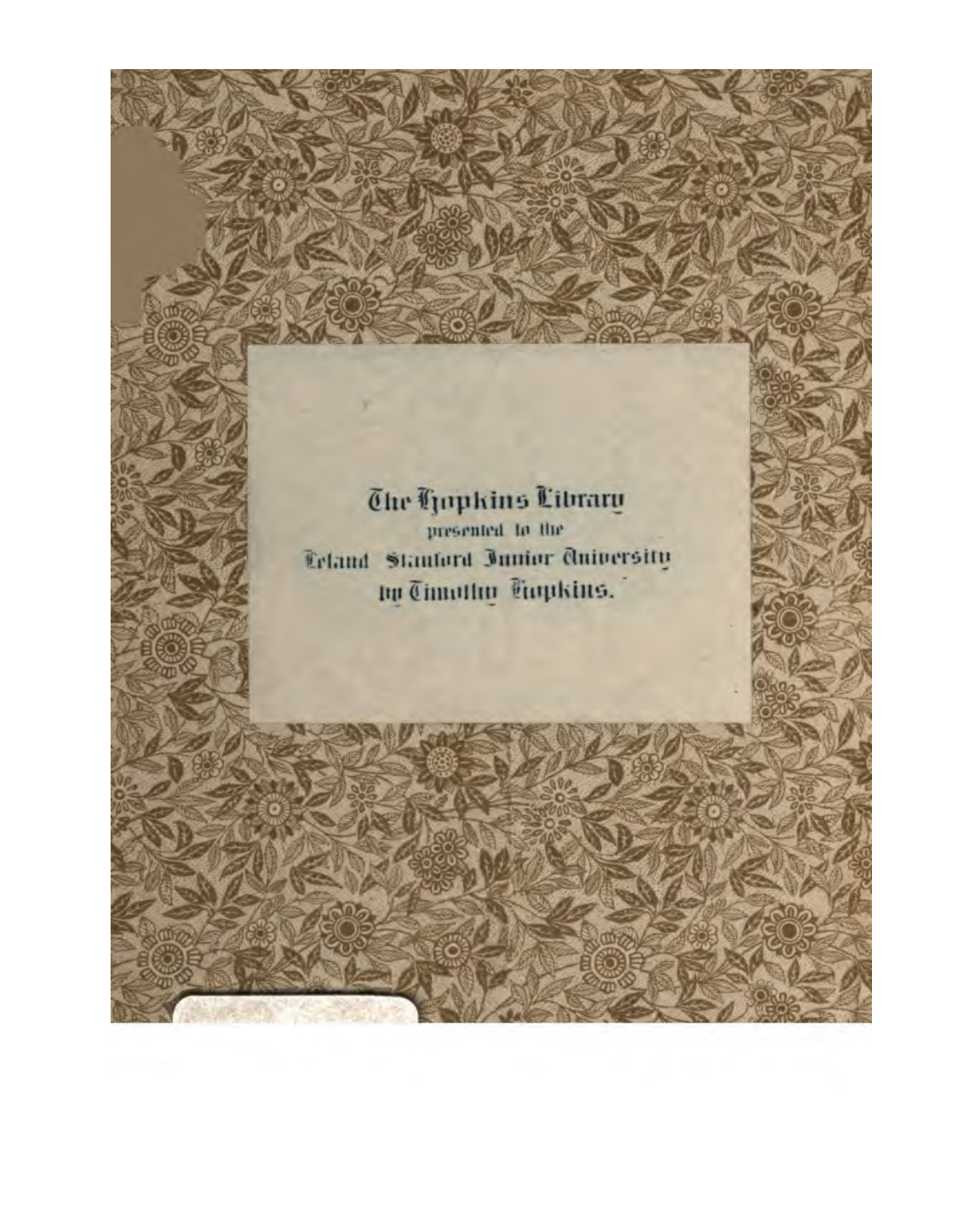
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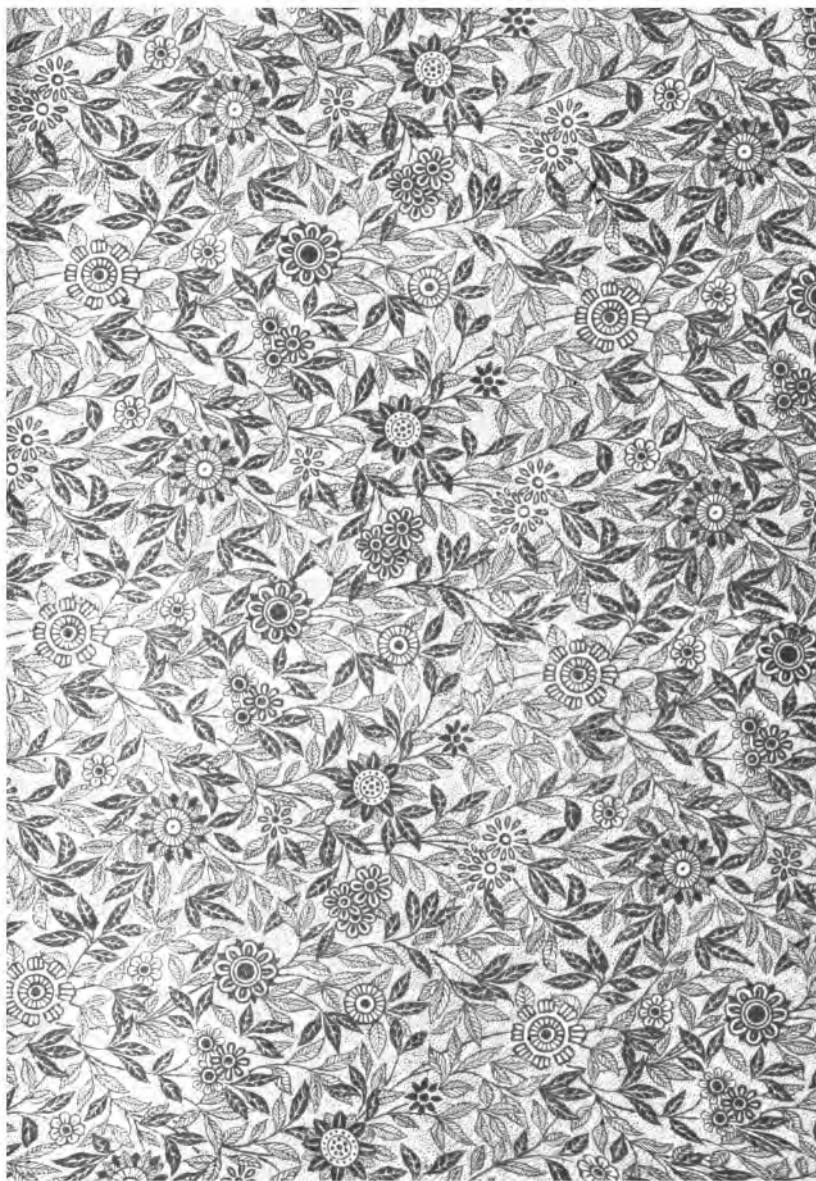
Guide  
to the  
Northern Pacific  
Railroad  
and its Allied Lines

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MOUNT TACOMA FROM COMMENCEMENT BAY.



# THE GREAT NORTHWEST

## A GUIDE-BOOK AND ITINERARY

FOR THE USE OF

TOURISTS AND TRAVELERS

OVER THE LINES OF THE

NORTHERN PACIFIC RAILROAD,

THE

OREGON RAILWAY AND NAVIGATION COMPANY

AND THE

OREGON AND CALIFORNIA RAILROAD.

*A. J. Winson*  
CONTAINING DESCRIPTIONS OF STATES, TERRITORIES, CITIES, TOWNS AND  
PLACES ALONG THE ROUTES OF THESE ALLIED SYSTEMS OF TRANS-  
PORTATION, AND EMBRACING FACTS RELATING TO THE  
HISTORY, RESOURCES, POPULATION, PRODUCTS AND  
NATURAL FEATURES OF THE GREAT  
NORTHWEST.

WITH

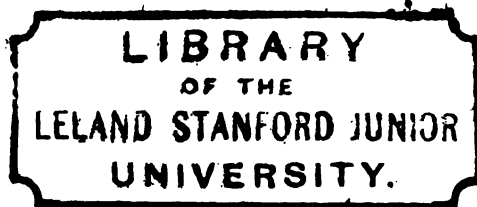
MAPS AND MANY ILLUSTRATIONS.

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NORTHERN NEWS CO.,

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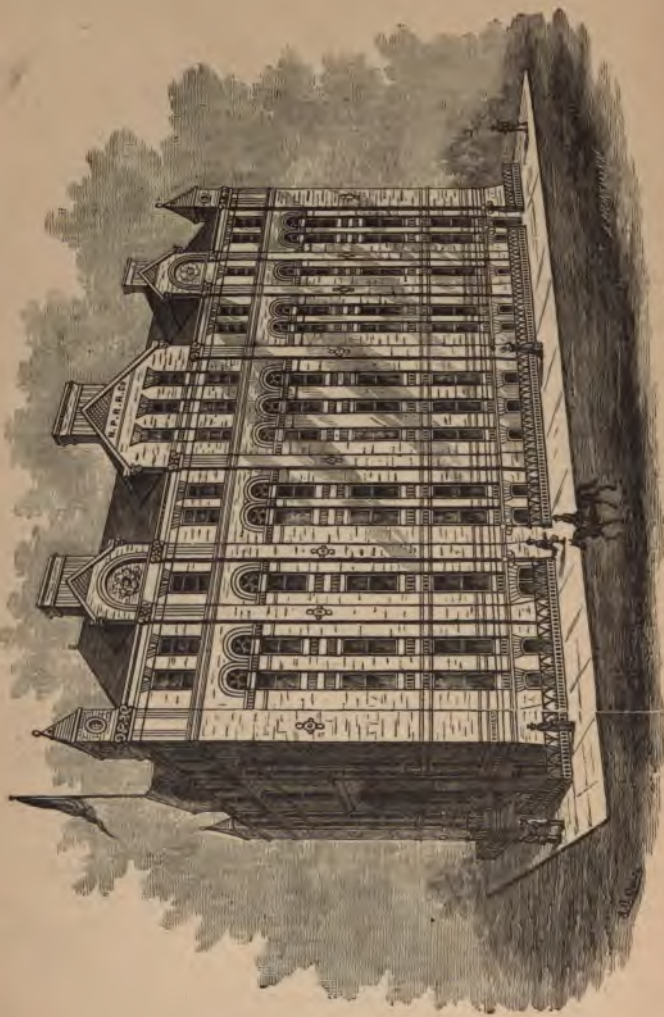
## PREFACE.

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THIS Guide Book is based, in large part, on the Guide Book written by Henry J. Winsor, and published in 1883. That work was prepared before the completion of the Northern Pacific Railroad, and was necessarily imperfect in many respects. It became more so with the development of the country along the line of the road, the growth of new towns, and the building of branch roads; so that a new work seemed imperatively demanded. No change has been made for the sake of change, but a large proportion of the original book has been rewritten in order to make the information desired by tourists and settlers fresh and accurate, and to bring it down to the date of the publication of this volume.

E. V. SMALLEY.



Headquarters and Offices, Northern Pacific Railroad Company, St. Paul.

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# INTRODUCTORY.

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THE region which is in process of development by the Northern Pacific Railroad, and the railroad systems with which it is in direct connection, embraces, in whole or in part, no less than seven of the largest States and Territories; viz., Wisconsin, Minnesota, Dakota, Montana, Idaho, Washington and Oregon; or, at a rough estimate, one-sixth of the area of the United States.

The distance between the extreme eastern and western termini of the main line, on Lake Superior and Puget Sound, Ashland, Wis., and Tacoma, Wash. Ter., inclusive of 210 miles of railroad along the Columbia river which belong to the allied Oregon Railway & Navigation Company, is 2,254 miles. By way of the Cascade Branch of the Northern Pacific, it is 1,961 miles.

The Northern Pacific Railroad is connected with the cities of St. Paul and Minneapolis by a lateral line 136 miles in length. It has also various other branches, including one to the Yellowstone National Park, which represent a total of 700 miles of track. In addition to these branches, the trunk line has for its immediate tributaries, the extensive systems of the Oregon Railway & Navigation Company, in Oregon and Washington Territory, and the Oregon & California Railroad, in Western Oregon.

This great system of allied railroads has opened to settlement, during the past few years, one of the fairest sections of

the country,—a region exceeded by no other part of the United States in its wealth of natural resources, and not surpassed in any of the conditions of climate or of soil which are best adapted to the well-being of the human race.

The Great Northwest has already become famous for the prodigality of its cereal productions; the salubrity of its climate is an accepted fact; the extent and variety of its mineral deposits, and the value of its grand forests, are everywhere acknowledged, while the marked diversity and extraordinary attraction of its scenery are recognized as not the least prominent of its features.

Now that the Northern Pacific Railroad is finished, the inviting regions of the Great Northwest, hitherto remote, are made easy of access. The tide of travel flows naturally with a strong current through this new and pleasant channel, and to pilot the wayfarer, this Guide Book has been written.

The aim has been to furnish the tourist and traveler with precisely that information which would seem requisite through the successive stages of the journey. The book embraces facts with reference to the history, present population, productions, resources and natural features of the country traversed by the Northern Pacific Railroad and its branch lines, and by its Western connections, the Oregon Railway & Navigation Company, and the Oregon & California Railroad, with some account of the ocean and river routes of the Pacific Northwest.

The salient features of the States, Territories, cities, towns, and all places of interest along the lines of these vast systems of railroad and water transportation, are described, and such material of local character is interspersed among the pages as may serve to interest the traveler in the course of his journey. In collating the facts which are here given to the public, the author has spared no effort to secure the utmost freshness and accuracy. The growth of the Great Northwest—

its cities and towns—in population and material prosperity, is, however, so rapid that the figures of to-day may seem far short of the truth a few months afterward.

### **Outline of the Northern Pacific Railroad's History.**

—The charter and organization of the Northern Pacific Railroad Company date from 1864; but the project to build the railroad over substantially the same route now traversed by the company's main line is much older. Indeed, it is the oldest of all projects to open railway communication with the Pacific coast. A railroad from the upper Mississippi to the mouth of the Columbia river was advocated as long ago as 1835, soon after the railway system was introduced in this country. About ten years later, an enterprising New York merchant, named Asa Whitney, who had made a fortune in China, urged upon Congress, session after session, a plan for building a railroad from the head of Lake Michigan, or from Prairie du Chien, on the Mississippi river, to the mouth of the Columbia river, in Oregon. He asked a land grant of sixty miles in width along the whole line of his proposed route. Many State legislatures passed resolutions in favor of Whitney's project, and Congress gave it much serious consideration. At one time Whitney's bill was within one vote of passing the Senate.

After the Mexican war came the annexation of California, followed by the gold discoveries and the rapid growth of population in that State. Then the general opinion in Congress and the country naturally favored the building of the first transcontinental line of railroad on a route ending at the Bay of San Francisco. Accordingly, the Union and Central Pacific Companies were chartered in 1862, with a grant of public lands, and a large subsidy of government bonds. Among the projectors of a line to California, was Josiah Perham, of Maine, then living in Boston, who had a charter from the State of Maine for the People's Pacific Railroad Company, and who,

in vain, attempted to get Congress to adopt his company, and give it the grants subsequently given to the Union and Central Companies. Failing in this effort, Mr. Perham turned to the northern road, which had been long and ably advocated as the best line to the Pacific coast by the eminent engineer Edward F. Johnson, and by Governor Stevens, of Washington Territory, who had been in command of the government expedition that surveyed the northern line in 1853. Stevens' surveys had shown the northern road was not only feasible, but was a better line in respect to grades and in regard to the character of the country traversed than any other.

In 1864, Congress passed a bill chartering the Northern Pacific Railroad Company, and naming as incorporators, among others, the men concerned with Perham in the old abortive People's Pacific Company. Under this charter, the company was organized in Boston, with Mr. Perham as its President, and an attempt was made to raise money for the construction of the road by a popular subscription to shares of stock at \$100 each. This attempt was an absolute failure, and after a year's futile effort Mr. Perham and his associates turned over the charter of the company to an organization of New England capitalists and railroad men, who proposed to make the road tributary to Boston. They elected J. Gregory Smith, of the Vermont Central Railroad, President of the Northern Pacific Company. Smith and his associates tried in vain for several years to obtain legislation from Congress guaranteeing the interest on the company's stock. The original charter did not allow the issue of bonds. Attempts in this direction were abandoned in 1869, and amendments to the charter were procured allowing the company to mortgage its road and land grant. A contract was then made with the banking house of Jay Cooke & Co., of Philadelphia, to sell the company's bonds. Mr. Cooke had negotiated the great war loans of the government, and was regarded as the most successful financier in the

country. In the short period of about two years, his firm disposed of over thirty millions of dollars of Northern Pacific bonds, bearing interest at  $7\frac{3}{4}\%$  per cent. With the money thus obtained, the work of construction was begun in the spring of 1870; and by the fall of 1873 the road had been completed from Duluth, at the head of Lake Superior, to Bismarck, on the Missouri river, and from Kalama, on the Columbia river, in Washington Territory, to Tacoma, on Puget Sound, the total number of miles completed being about 600.

The great financial panic of 1873 prostrated the house of Jay Cooke & Co., wholly stopped the sale of Northern Pacific bonds, and made it impossible to go on with the road. The company was insolvent, and, after a time, its directors threw it into bankruptcy, and, with the cordial assent of its bondholders, reorganized its affairs so as to free it from debt, by converting its outstanding bonds into preferred stock. When the effects of the panic and the succeeding hard times had begun to pass by, the managers of the Northern Pacific recommenced the work of building its long line across the continent. The construction began with the Cascade branch, from Tacoma to the newly discovered coal fields at the base of the Cascade Mountains. Then a loan was negotiated for building the Missouri Division, from the Missouri to the Yellowstone river; and shortly afterward another loan for the construction of the Pend d'Oreille Division, from the mouth of the Columbia river to Lake Pend d'Oreille, in Idaho. In the meantime, several changes had occurred in the presidency of the road. President Smith had been succeeded, in 1874, by General Cass, and he by Charles B. Wright, of Philadelphia. Mr. Wright's resignation, in 1879, was followed by the election of Frederick Billings, under whose management the work of construction was carried on until 1881. A general first mortgage loan was negotiated to provide the means for completing and equipping the entire line. The credit of the company had by this time



become so good that its bonds were readily sold above par by a syndicate of the leading bankers of New York City.

In 1881, Henry Villard, who had previously obtained control of all the transportation lines, both rail, sea and river, in Oregon and Washington, purchased for himself and friends a controlling interest in the stock of the Northern Pacific Company, and was elected its President. His purpose was to ally to the Continental Trunk Line, as feeders and extensions, the lines under his management on the Pacific coast. To accomplish this and to secure an identity of interest, he organized the Oregon & Transcontinental Company, which holds a large portion of the stock of the Northern Pacific, the Oregon Railway & Navigation Company, and the Oregon & California Railway Company, and which builds branches for the Northern Pacific under an arrangement by which the latter company operates them and in time becomes the owner of their stock. Under the efficient management of President Villard and Vice-President Thomas F. Oakes, the work on both ends of the Northern Pacific was prosecuted with great vigor during the years 1881, 1882 and 1883, until the ends of track, advancing from both sides of the continent, met near the summit of the Rocky Mountains.

The last rail on the Northern Pacific Railroad was laid with impressive ceremonies on September 23d, 1883, at a point in the valley of the Hellgate river, near the mouth of Gold creek. Four trains of invited guests came over the road from the East, and one train from the Pacific coast. Among the distinguished guests were a number of members of the English and German Parliaments, all the British and American ambassadors at Washington, and members of the American Congress, General U. S. Grant, the Governors of all the States and Territories traversed by the line, and the former Presidents of the Northern Pacific Company; also a number of distinguished engineers and scientists from both sides of the Atlantic, and

many representatives of leading newspapers in America and Europe. An oration was delivered by Hon. W. M. Evarts. The last spike was driven by Henry Villard, then President of the company, and the road was immediately opened for traffic.

The extraordinary decline in the market value of railroad securities which began in the fall of 1883, prevented a full realization of the plans formed by Mr. Villard. He resigned the Presidency of the Northern Pacific Railroad the following winter, and also that of the Oregon Railway & Navigation Company and the Oregon & Transcontinental Company, and later of the Oregon & California Company, so that there was no longer a community of interests between these corporations. He was succeeded in the presidency of the Northern Pacific Company by Robert Harris, long a Director in the company, and formerly Vice-President of the New York, Lake Erie & Western Railway, and the general management of the road was undertaken by Vice-President Thomas F. Oakes, who removed from New York to St. Paul for that purpose. Elijah Smith, of Boston, became President of the Oregon Railway & Navigation Company. The Oregon & Transcontinental Company suffered serious financial embarrassment, and ceased to be an important factor in connection with Northern Pacific affairs. Meanwhile the Union Pacific Railway Company had extended its Oregon Short Line branch from Granger, on its main line, to Huntington, on the Snake river, where it was met by the Mountain Division of the Oregon Railway & Navigation Company, thus forming a new line from the East to Portland.

In 1885 a joint lease of all the transportation lines of the Oregon Railway & Navigation Company by the Northern Pacific and Union Pacific Companies on an equal basis as to traffic and profits, was drawn up and long considered, but was not consummated. The Northern Pacific continued, in the meantime, to vigorously push construction on its short

line to Puget Sound by way of the Yakima valley, the Stampede Pass across the Cascade Mountains and the Puyallup valley, constructing a tunnel about 9,000 feet long at the summit of the pass.

**Routes from the East to St. Paul.**—The distances from New York, *via* Chicago to St. Paul, Minn., by the several trunk lines, are as follows :

#### NEW YORK TO CHICAGO.

	MILES.
<i>Via</i> Pennsylvania Railroad .....	912
“ Erie Railway .....	958
“ New York Central Railroad.....	977
“ Baltimore & Ohio Railroad .....	1,041

#### CHICAGO TO ST. PAUL.

	MILES.
<i>Via</i> Chicago, Milwaukee & St. Paul Railway .....	410
“ Chicago & North-Western Railway .....	410
“ Chicago, Rock Island and Pacific Railway .....	529

Tourists from Philadelphia usually go by way of the Pennsylvania Central. From Baltimore and Washington there is a choice of either the Northern Central, with Pennsylvania Central connections, or the Baltimore & Ohio Railroad. From Boston, the most direct route is that of the Boston & Albany Railroad to its connection with the New York Central.

**Via the Lakes.**—In summer, tourists may take a comfortable and agreeable method of reaching the Northern Pacific Railroad at Duluth, on Lake Superior, by way of the great lakes. The Lake Superior Transit Company runs lines of fine passenger steamers from Buffalo, Cleveland, Detroit and other ports, through Lake Erie, Lake Huron, and by way of the great

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\* For a complete history of the Northern Pacific Railroad, the reader is referred to a volume by E. V. Smalley, published by G. P. Putnam's Sons, New York, which describes the beginning and progress of the enterprise, its legislative, financial and administrative phases, the engineering and constructive work on the line, and the resources and chief characteristics of the extensive regions traversed by the road.

Government Canal of Sault Ste. Marie, passing through the whole length of Lake Superior, and touching many of its interesting ports.

**Sleeping Car Expenses.**—Pullman, or other palace cars, run on the through trains of all the aforementioned railroads. The cost of sleeping car accommodation is the same on all the routes, and the tariff is as follows :

	HALF SECTION.	SECTION.
From New York to Chicago .....	\$ 5 00	\$10 00
“ Chicago to St. Paul .....	2 00	4 00
“ St. Paul to Portland .....	15 00	30 00

The Northern Pacific Railroad is equipped with Pullman Palace Cars of the latest construction, the appointments of which combine the newest inventions for the perfect accommodation and absolute comfort of passengers.

**Dining Cars.**—Dining cars, built expressly to meet the needs of the long journey, are attached to all through trains of the Northern Pacific Railroad. In these cars sumptuous meals are served at the uniform rate of seventy-five cents. This adds greatly to the luxury of traveling, entirely obviating the discomfort which is too often experienced where dependence for food is placed upon wayside dining stations.

**Transfer Coaches.**—In all the Western cities there are lines of transfer coaches ready on the arrival of the train to take the traveler and his baggage direct to any hotel, or transfer him across the city to any depot. The transfer agent passes through the cars before the arrival of the train, selling transfer checks and tickets. The service is trustworthy and convenient, and the charge is uniformly fifty cents.

## MINNESOTA.

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Minnesota is situated in a high northern latitude, elevated from 1,000 to 1,800 feet above the ocean, and has a peculiarly dry and salubrious climate. The most rugged portions of the State are about Lake Superior, along the Mississippi river, and on the heights of land which divide the sources of the great river systems. The area of Minnesota embraces 83,530 square miles, or 53,459,840 acres, about two-thirds of which is undulating and well adapted to cultivation. Within the limits of the State three great river and lake systems have their sources: viz., the Mississippi and its northern tributaries; the St. Louis river and its numerous branches, forming the head of those waters which find their way through the great lakes into the St. Lawrence; and lastly, the affluents of the Red River of the North, Rainy Lake and Lake of the Woods, which discharge their waters into Hudson's Bay. Wood-girt lakes, more than 7,000 in number, most of which are quite deep and full of fish, having shores generally firm and dry, bottoms sandy or pebbly, and waters clear, cool and pure, dimple in every direction the undulating lands. The average area of these lakes is about three hundred acres; but many are very large. For example: Red Lake is estimated to equal 340,000 acres; Mille Lacs, 130,000; Leech Lake, 114,000; Winnebagoishish, 56,000; Minnetonka, 16,000; and a number of others exceed 5,000 acres.

The Mississippi, rising in Lake Itasca, 826 feet above the mouth of Lake Minnesota, lends the State a shore line of one thousand miles. In its descent, the river is broken at intervals *by numerous falls* and rapids, which afford valuable water-

powers. Among the more important of those which have been utilized are the Falls of St. Anthony, at Minneapolis, one of the largest water-powers in the known world ; Sauk Rapids, with 32,000 horse-power ; Pike Rapids, 12,000 ; Prairie Rapids, 6,000 ; Olmstead's Bar, 9,000 ; and French Rapids, above Brainerd, 670. Nineteen of Minnesota's streams pour their waters into the Mississippi, each of which affords water-power of more or less capacity.

The St. Louis river, rising in the northern part of St. Louis county, flows through a vast pine region, and, after receiving the waters of many tributary streams, descends to the level of Lake Superior. There is an immense water-power afforded by the numerous rapids in this river. Its fall is estimated at over 500 feet during a course of fifteen miles, and the power is believed to be equal to that of the Mississippi at Minneapolis. A company has been recently organized with a capital of \$1,000,000, having in view the development of the water-power on this river.

Fergus Falls, on the Red river, and several other falls and rapids on the Knife, Cloquet, Moose, Kettle, St. Croix, and a score of other fine streams, exhibit the distribution of water-power throughout the State.

Only a small fraction of this power has been developed or is now in use ; but, considering its magnitude and diffusion, the capacity of the surrounding country for supplying the raw material, and the widespread field for the consumption of manufactured products, it is impossible to limit the industrial progress which this bounteous water-power makes possible.

No Western State has made more progress in railroad construction than Minnesota, and none possesses greater facilities for travel and transportation. At the end of 1862 there were only ten miles of railroad in operation ; but twenty years afterward, at the close of 1882, a network of over 4,000 miles of railroad covered the State, bringing every town and village,

except those in the great unorganized counties of the northern section, within twenty miles of a railroad station. As to navigable waters, there are not less than 2,796 miles of shore line within the limits of the State, or about one mile of coast line to every thirty square miles of surface.

The soil of Minnesota is very fertile, and the increase of agricultural production has kept pace with the development of railways and other means of transportation. The manufacturing interests of the State are already very large,—flour and lumber being the leading commodities, although there are a great variety of other important industries. The products of the mills alone were estimated in round numbers at \$100,000,000 in value in 1882. The population, at present about 1,250,000, is largely increased every year, and the steady advance in the taxable valuations of property shows that the commonwealth is rapidly growing in material prosperity.

Although Minnesota is generally classed as a prairie State, in reality its surface is about one-third wooded. The timber lands of Minnesota extend over a large part of the northern and eastern sections of the State. The hard-wood belt alone covers an area of 5,000 square miles, and consists of white and black oak, maple, hickory, elm, with varieties of soft woods, such as spruce, tamarack and cottonwood.

The pine lands stretch over an immense territory, clothing the headwaters of the great river and lake systems which have their sources in Minnesota, and forming a continuation of the great pine belt which extends across northern Wisconsin. This great tract of timber is traversed by the waters of the St. Croix, Mississippi, St. Louis, and their myriad of tributaries, thus furnishing convenient channels for floating the logs which are cut during the winter, at high water in the spring, to points where saw mills convert them into lumber.

From the head of Lake Superior west 150 miles, and east from Superior City along the Wisconsin Division of the North-

ern Pacific Railroad to Ashland, the railroad traverses a country of great wealth in timber, consisting of densely wooded and magnificent pine forests interspersed with occasional tracts of hard-wood timber. The pine lands in Minnesota extend north of the line of the Northern Pacific Railroad a distance of over one hundred miles, covering an area of more than twenty thousand square miles, and afford a veritable gold mine to the lumberman and manufacturer.

The climate of Minnesota possesses those characteristics which are peculiar to the northern belt of the temperate zone at a considerable distance from the seaboard. The range of the thermometer is great at all seasons, frequently exceeding  $50^{\circ}$  during the winter and spring months, and showing variations of  $40^{\circ}$  in the summer season. For six years the mean winter temperature, as given by the United States Signal Service at St. Paul, was  $18^{\circ} 45'$  in winter,  $45^{\circ} 50'$  in spring,  $70^{\circ} 49'$  in summer, and  $44^{\circ} 14'$  in autumn, and this included two remarkably cold seasons. The bright sunshine of summer forces vegetation with great rapidity and luxuriance. The thermometer in winter often drops under zero, sometimes registering  $30^{\circ}$  below; but the stillness and dryness of the air make the cold far from disagreeable. An ordinary still day in Minnesota, with the thermometer ranging from zero to  $10^{\circ}$  or  $12^{\circ}$  below, is really enjoyable, and mechanics are able to work out of doors at this temperature without inconvenience. Spring does not linger in the lap of winter, but bursts forth on the approach of May; and the Indian summer, late in November, is a season of almost magical beauty and softness. The climate, indeed, is considered one of the most healthy in the world. Persons afflicted with pulmonary diseases are sent to Minnesota to recover their strength and vigor, and thousands of consumptive patients bless the dry and balmy qualities in the atmosphere, which are potent enough to rescue such sufferers from untimely death.



## ST. PAUL.

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This city, the capital of Minnesota, is picturesquely situated at the head of steamboat navigation on the Mississippi river, over two thousand miles from its mouth. In 1848, when Congress gave the State its Territorial organization, fixing the seat of government at St. Paul, the name of the place appeared on no map, and geographers only knew that it was a very small settlement, somewhere near the Falls of St. Anthony, in that indefinite region called the Far West. To-day St. Paul has about 125,000 inhabitants, and its wonderful growth and prosperity fairly class it among the remarkable cities of the great Northwest. Many of its people, now scarcely beyond middle age, remember well its appearance on the advent of the white man's civilization. It was at that time a favorite resort of the Indians, to whom it was known as Im-mi-gas-ka, or White Rock, on account of the towering bluffs of sandstone which mark the course of the river. A succession of undulating and beautiful hills, clothed with forest, overlooked the Father of Waters, whose banks were bordered by graceful elms. The valleys between the heights were little more than deep ravines, through which numbers of rivulets flowed down to the great river. The site of St. Paul has been recently described by one of the pioneers, who reached the place in 1853, "as showing here and there a log shanty inhabited by the white men who had ventured to the headwaters of the Mississippi river in search of adventure or gain; but by far the bulk of the population was represented by the untutored savage, whose tipis and wigwams occupied the hills and valleys that now constitute the city. Since that time a generation has not passed away,

and behold what man hath wrought! The writer, who still claims to be a young man, *crawled* into the embryo city in 1853, being landed at the lower levee, near what is now the foot of Jackson Street. The only means then provided for getting into the city proper were a number of steps cut into the bluff, the top of which at that time would enable a person to step into the third-story window of the present St. Paul Fire and Marine Insurance building, on the corner of Third and Jackson Streets. A few feet distant from the top of the bluff was a log hotel, a story and a half high, which was then known as the Merchants' Hotel, the building now on its site still retaining that name. A little further up, at the present crossing of Fourth and Jackson Streets, was a rude bridge which spanned a ravine some twenty-five or thirty feet deep, through which during certain seasons of the year a rushing torrent of water found its way to an outlet in the Mississippi river near Dayton's Bluff. This stream had its rise in and was the outlet of what was then a lake or marsh at the foot of St. Anthony Hill, upon the bosom of which it was not an unusual sight to see all kinds of water fowl, and there are persons still living in St. Paul who have shot wild geese and ducks there. At that time, during the season of high water, steamboats of the largest size would enter the outlet of this stream near Dayton's Bluff, and land within a few hundred feet of the Merchants' Hotel, sailing over the space that is now occupied by solid stone and brick blocks, where almost the entire wholesale business of St. Paul is at present conducted. The rushing torrent has given place to paved streets, and the lake, with fifteen to twenty feet depth of water, is now covered with four and five story business blocks of buildings. It is within the memory of the comparatively new comers to St. Paul when a traveling circus company spread its canvas upon Baptist Hill, fully twenty feet above the highest chimney of the substantial block on the corner of Fourth and Sibley Streets. Third Street was but a sort of

straggling highway. The locality now occupied by the fine block running from Third to Fourth Street on Minnesota Street was the burial place of the dead. The old Capitol building, which was destroyed by fire in 1881, was then in course of erection, and to reach it the pedestrian had to wade through mud nearly knee-deep, without a sign of a sidewalk, or any attempt at street grading. St. Paul proper, as it is now designated upon the maps, was about all there was of any attempts made toward laying out even a village."

St. Paul is built upon a succession of four distinct terraces, which rise in gradation from the river. The first is the low bottom which forms the levee. This was formerly subject to overflow ; but it has been raised above high-water mark, and is now a very valuable property, occupied by warehouses, railroad tracks, the Union Depot and business offices. On the second and third terraces the principal part of the city is established. The second terrace, which is about ninety feet above the level of the river, is also devoted to business, and is thickly studded with fine blocks of buildings. Some of these are so commandingly situated on the high bluffs which overhang the Mississippi as to be visible a long distance up and down the stream, giving the city an imposing architectural appearance as it is approached by rail or river. The third terrace, very little higher than the second, widens out into a broad plateau, upon which stands much of the residence portion of the city. These upper terraces are on a foundation of blue limestone rock, from twelve to twenty feet in thickness, forming an excellent building material. Beneath this stratum is a bed of friable white quartzose sandstone of unknown depth, which is easily tunneled, and through which all the sewers have been excavated. The fourth, or highest terrace, is a semicircular range of hills, inclosing the main portion of St. Paul as in an amphitheatre. The picturesque sweep of these heights, *forming to the curve of the river, with their growth of native*

forests, and the stately residences which are scattered over their slopes, is a characteristic charm of St. Paul. Fine avenues have been laid out over many of the hills, leading away into the prairie lands beyond, or to some of the beautiful lakes in the neighborhood, and the residence part of the city is rapidly extending in every direction.

It can not be denied that the site of St. Paul was a costly one upon which to build a city. Its hills had to be leveled, its valleys filled up and its crookedness made straight, at great expense of labor and money. But the street improvements are carried on regardless of the necessary expense, and the result already is eminently satisfactory. The capital of Minnesota is likely always to be noted as much for its beauty and salubrity as for its enterprise and commercial prosperity. The inconveniences and discomforts of frontier life have long since disappeared. The streets are paved and sewered, and lighted with gas and electricity. Pure water, in ample supply, is brought to every house through miles of pipe from distant lakes; street cars traverse the city in all directions; frequent local trains give easy access to the charming suburbs; the rough log chapel of 1849 has been superseded by nearly a hundred places of worship, many of which are beautiful in architecture; the primitive log school-house has given place to eighteen massive public school buildings of brick and stone, in which are educated more than 10,000 pupils; there are three hospitals, two orphan asylums, a dozen banks, many imposing public and private buildings, several charitable and social institutions, excellent vocal and instrumental musical organizations, a boating club, numerous tobogganing and snowshoe clubs, lodges of secret and mutual benefit associations, military organizations, an opera house, and three minor theatres.

The most conspicuous building in the city is the new county court house, built of stone at a cost of about one million dol-

lars. It is the most imposing public structure in the entire Northwest. Other noteworthy buildings are the State Capitol, the United States Postoffice and Custom House, the Union Depot, the city market, the Ryan Hotel, the German-American National Bank, the St. Paul Club House, the Catholic cathedral and numerous handsome churches, the Northern Pacific building and the Chamber of Commerce building. The principal hotels are the Ryan, Merchants', Metropolitan and Windsor. The Ryan compares, in size, elegance and comfort, with the great hotels of Chicago and New York. The wholesale trade of St. Paul amounted, in 1885, to \$81,420,000, and is constantly increasing. The manufacturing establishments produced, in 1885, about thirty millions' worth of goods. The number of new buildings erected during 1885 aggregated in value over nine millions of dollars. The city is the principal monetary centre of the Northwest, having six national and five State banks, with an aggregated capital of \$7,624,000. St. Paul is a port of entry, and her merchants are enabled to import goods directly from foreign countries.

The railroad system of which St. Paul is the focus, has lines radiating to every point of the compass, and is constantly increasing in importance. The city is connected with Chicago by six trunk lines of road; namely, the Chicago, Milwaukee & St. Paul; the Chicago & North-Western, with the affiliated lines of the Chicago, St. Paul, Minneapolis & Omaha; the Chicago, Burlington & Quincy; the Wisconsin Central; the Minnesota & Northwestern, which connects with the lines of the Illinois Central, and the Albert Lea route, by way of the Minneapolis & St. Louis, and the Chicago, Rock Island & Pacific. In a northeastern direction runs the Minneapolis & Sault Ste. Marie, to be extended to a connection with the Canadian roads at the Sault. In a northern direction, the St. Paul & Duluth unites the city with Duluth, at the head of Lake Superior. The great transcontinental trunk line of the

Northern Pacific places the city in direct communication with the entire belt of country extending westward to the Pacific coast. The St. Paul, Minneapolis & Manitoba Railroad Company operates two main lines and numerous branches and feeders which occupy a great part of Northern Minnesota, and of the Red river valley in Dakota, and reaches as far as Manitoba. The numerous lines of the Omaha system bring to St. Paul business of extensive regions in Wisconsin, Minnesota, Iowa and Nebraska. The Chicago, Milwaukee & St. Paul and the Chicago & North-Western have also numerous local lines tributary to St. Paul, and their western extensions reach as far as the Missouri river, in Dakota.

The navigation of the Mississippi river is an important feature of the business of St. Paul. Two lines of large passenger steamers ply between St. Paul and St. Louis, connecting at the latter place with boats for all points on the lower Mississippi. Navigation usually opens in April, and closes about the middle of November.

The Mississippi is spanned at St. Paul by three great iron bridges, one giving access to the trains of the Minnesota & Northwestern Railroad, and the other two being viaducts for ordinary travel, connecting West St. Paul with the business centre of the city by way of Wabasha and Robert Streets.

**West St. Paul** occupies the low plain on the west shore of the river, and climbs the high, picturesque bluff beyond. It had in 1885 a population of about 13,000, and is the seat of considerable manufacturing and local trade. It is included in the municipality of St. Paul.

There are many beautiful drives in the city and its suburbs, and a large number of resorts in the neighborhood, which may be reached by river and rail. The drive to *Lake Como*, four miles distant, is over a fine, hard gravel road, and the jaunt thither on a cool summer evening is delightful. In Dayton's Bluff, near the river, on the east side of the city, is the natural

curiosity known as *Carver's Cave*, named after Jonathan Carver, of Connecticut, who, in 1763, under a commission from the King of England, led an exploring expedition into this region, and made a treaty with the Indians, by which the title to an immense tract of land was ceded to him. Carver described the country as being beautiful, the soil fertile, and the climate agreeable, and proposed founding a colony; but his designs were frustrated by the breaking out of the war of American Independence. *White Bear Lake*, twelve miles distant, on the St. Paul & Duluth Railroad, is about nine miles in circumference. Its picturesque shores are lined with summer hotels and beautiful villas, and a large wooded island, recently connected with the mainland by a causeway and bridge, has been laid out by the wealthy residents of St. Paul into plats for summer residences. The lake affords excellent fishing, boating and bathing. *Bald Eagle Lake*, a mile beyond, noted for its scenery and good opportunities for fishing, is quite popular as a resort for picnic parties. *Lake Elmo*, on the Chicago, St. Paul, Minneapolis & Omaha Railroad, twelve miles eastward of St. Paul, is also a much frequented summer resort, offering great attractions for boating, bathing and fishing. The water of these lakes is very bright and pure, and the shores are forested with oak, maple, elm, hickory, and other deciduous trees.

**Fort Snelling.**—This military post, the headquarters of the Department of Dakota, was established in 1819, with the view of protecting the few settlers who, at so early a date, were brave enough to penetrate the great wilderness west of the Mississippi. The fort is massively built on the northern bank of the Minnesota river, just at its junction with the Father of Waters. The situation of the fort is strikingly picturesque, its white walls reared upon the brink of a jutting bluff with an almost vertical face, its base being washed by the flood one hundred feet below. Fort Snelling was finished

in 1822. Its form was circular, and its high walls were broken at intervals by embrasures for cannon to sweep the approaches. It has since undergone some alterations; but the original structure still remains. This fort has had an eventful history, having witnessed many scenes of savage warfare. It is still one of the most important posts in the West. Fort Snelling is about half way between St. Paul and Minneapolis, being connected with the main road by a long iron bridge which airily spans the Mississippi.

**The Falls of Minnehaha.**—This beautiful water-fall, made immortal by Longfellow in his poem "Hiawatha," is to be seen on the road toward Minneapolis, two miles beyond Fort Snelling. It is formed by an abrupt break in the bed of Little Minnehaha creek, one of the outlets of Lake Minnetonka. This stream babbles along through miles of verdant meadows in the most quiet and commonplace way, to make an unexpected leap at last into a deep gorge, and find itself famous and beautiful. In a recent issue of *Harper's Magazine* the Falls of Minnehaha are aptly characterized by Ernest Ingersoll in this wise:

"The outlet of Lake Minnetonka is a sparkling little brook that encircles the city, steals through the wheat fields, races under a dark culvert where the phœbe birds breed, and then, with most gleeful abandon, leaps off a precipice sixty feet straight down into a maple-shadowed, brier-choked cañon, and prattles on as though nothing had happened but a bit of childish gymnastics.

"It is very charming, this rough and rock-hemmed little gorge through the woods and fern-brakes, and this fraudulent little beauty of a cascade; and it laughs without a prick of conscience, laughs in the most feminine and silvery tones from a rainbow-tinted and smiling face, when you remind it that it is a bewitching little thief of credit,—for the true Minnehaha is over on the brimming river, a slave to the mills. But, right or wrong, little stream, thou art a princess among all the cascades of the world. Thy beauty grows upon us, and



lingers in our minds like that of a lovely child, whether we wade into the brown water at thy feet, scaring the happy fishes clustered there, and gaze upward at the snowy festoons that, with a soft, hissing murmur of delight, chase each other down the swift slope; or creep to thy grassy margin above, and try to count the wavelets crowding to glide so glibly over the round, transparent brink; or walk behind thy veil, and view the green valley as thou seest it, through the silvery and iridescent haze of thy mist drapery. Thou hast no need of a poet's pen to sing thy praise; but had not the poet helped thy fraud, enchanting Minnehaha, not half this daily crowd would come to see thee, and to drink beer on thy banks, and murmur maudlin nonsense about Hiawatha and his mystical maiden. Nevertheless, thou art the loveliest of cascades, and an enchantress whose sins can be forgiven because of thy beauty."

**The Inter-urban District.**—St. Paul and Minneapolis are connected by three lines of railroad owned by the Chicago, Milwaukee & St. Paul, the St. Paul, Minneapolis & Manitoba, and St. Paul & Northern Pacific Companies. Numerous suburban villages have sprung up along the lines of these roads, and the whole territory between the well-built portions of the two cities is fast building up with residences and manufacturing concerns. The corporate limits of the two municipalities touch each other, and the distance between the thickly built districts is only about six miles. St. Paul and Minneapolis are plainly destined to become a single commercial centre, rivaling Chicago in population and volume of business. The distance from the western limits of Minneapolis to the eastern limits of St. Paul is not as great as that from the extreme northern portion of Chicago to its southern boundary. By the time the present population of these two cities shall have doubled, the whole territory between them will be covered with buildings.

The principal suburban towns in the Inter-urban District are now *Merriam Park* and *Union Park*; *Minnesota Transfer*, with

its elevators and stock yards ; *Macalaster Park*, with its college; *Hamline*, with its university; *St. Anthony's Park*; *Como*, with its beautiful lake; and the suburb surrounding the great Northern Pacific shops.

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## MINNEAPOLIS.

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This beautiful city is the twin sister of St. Paul, distant about eight miles westward on the Mississippi, although the suburbs of both are so rapidly nearing one another that the twain are likely soon to merge into a single metropolis. Thirty years ago the site upon which Minneapolis stands was a part of the Fort Snelling military reservation, and no foot save that of the red man had pressed the soil. At this point further navigation of the Mississippi river was barred by the Falls of St. Anthony, and one of the finest of water-powers awaited the genius of the Anglo-Saxon race to render it useful. To-day, 1885, Minneapolis numbers about 130,000 inhabitants. Surely, even in this era of rapid growth in Western cities, to which the mind is somewhat accustomed, the development of Minneapolis into a place of its present importance is surprising.

The topography of the city is greatly in its favor. Situated on a broad plateau, high above the upper level of the river at the falls, there is no danger from overflow ; and yet the level of the place is so near that of the surrounding country, that the grades to and from the city admit the construction of rail and wagon roads with comparative ease, while the subsoil affords a foundation upon which the most massive buildings may be safely erected. The relation of Minneapolis to the surrounding country is everything that could be desired. The city lies on the eastern border of the great wheat belt of the

Golden Northwest, and on the southern border of the pine and hard-wood timber region of Minnesota. Here the wealth of raw material naturally finds its way to be conveniently converted into flour and lumber by the use of the grand water-power, estimated at a capacity of 120,000 horses, within the city, and the product of the mills is afterward forwarded to the markets of the world.

The Falls of St. Anthony, upon which the prosperity of Minneapolis is mainly founded, have a perpendicular height of eighteen feet, and the Mississippi has a rapid descent of eighty-two feet within the limits of the city. The view of the rapids above the cataract is very fine; but the picturesqueness of the water-fall has been sacrificed to purposes of utility. To prevent the wearing away of the ledge of rocks, a broad, smooth wooden apron has been constructed entirely across the river, sloping from the edge of the fall to a point far beyond its base, and, on reaching this, the water slips over, calmly and unvexed. The best view of the scene is from the magnificent suspension bridge of iron which spans the flood in graceful length, and with picturesque effect, at about the centre of the city. From this vantage-point an outlook is obtained upon the railroad tracks that stretch along below the bluffs, and also upon the river, with its channel above the falls almost choked with booms of logs that are to be cut into lumber by the extensive mills which line the shores. The water-power is used for driving the machinery of the foundries, woolen mills and many other branches of mechanical industry of which Minneapolis is the seat.

Minneapolis is regularly laid out, broad avenues running from east to west, crossed by streets from north to south. The thoroughfares are usually eighty feet in width, with wide sidewalks, shaded by rows of forest trees. There are many imposing business blocks, and the residence portion of the city is attractive, with its fine, spacious houses, and well-kept lawns

and grounds. On the outskirts of the city are thousands of pleasant cottages, which are the comfortable homes of the industrious mechanics who find employment in the mills and manufactories.

The business centre of the city of Minneapolis is about ten miles distant from that of the city of St. Paul. The two places are frequently called the twin cities of Minnesota, and also the dual metropolis of the Northwest. Minneapolis is younger than its neighbor, and has grown with surprising rapidity, its progress being largely facilitated by the excellent advantages for manufacturing afforded by the great water-power of the Falls of Saint Anthony. Minneapolis did not fairly emerge from the village condition until 1870, when its population was 13,000. In 1880 the Federal census gave it 46,800 inhabitants, and in 1885 the State census discovered 129,000 people within its corporate limits. The principal sources of its prosperity are manufacturing industries in various forms, and especially in those of lumber and flour production. It has a large wholesale trade, and is in every respect a completely equipped commercial centre.

The most notable buildings are the Chamber of Commerce, the City Hall, the Tribune building, the Corn Exchange, the Lumber Exchange, the State University, many handsome churches, the High School building, the West Hotel, the Syndicate block, the Union Depot, and the flouring mills of the Washburn and Pillsbury companies. Many of the business blocks are built of stone, and present lofty and handsome architectural fronts. The importance of the lumber trade may be judged by the fact, that in 1885 the saw mills cut 313,998,000 feet, and made 101,857,000 shingles and 82,175,000 lath. The output of flour for the milling year 1885 was 5,473,000 barrels. Minneapolis has become in recent years the most important wheat market in the United States. The receipts of wheat for the crop year ending September, 1885,

were 32,112,000 bushels, a larger amount than was received in either Chicago or New York. The jobbing trade of the city for 1885 aggregated \$42,608,000.

The University of Minnesota, a State institution, is located in the eastern part of Minneapolis, and is provided with substantial buildings and spacious, well-kept grounds. It is liberally endowed, and takes rank with the leading institutions of learning in the country.

The two sections of the city separated by the Mississippi river are connected by two iron bridges and a suspension bridge. The river is also spanned near the city limits by four railway bridges; one of which is a substantial stone viaduct erected by the St. Paul, Minneapolis & Manitoba Company at an expense of nearly half a million of dollars. The Northern Pacific Company have two handsome iron bridges, one crossing the river over the deep gorge below the falls, and the other spanning its broader expanse in the western outskirts of the city.

All the railroads running into St. Paul have a connection with Minneapolis, either over their own or over leased tracks, so that the two cities, in reality, constitute a single railroad centre. Cattle, grain, and other heavy freight are transferred at Minnesota Transfer, about midway between Minneapolis and St. Paul. Frequent local trains run between the two cities over three lines of road.

**Lake Minnetonka.**—Fifteen miles west of Minneapolis lies Lake Minnetonka, the most popular summer resort of Minnesota. It is a beautiful sheet of water, about twenty miles long, of very irregular form, having a varying width of from half a mile to three miles. Its shores are bold and prettily wooded with oak groves, affording admirable sites for summer residences. A large number of visitors come every summer to Minnetonka from the Southern States, attracted by the cool and agreeable climate, the excellent hotels and facilities for

boating and out-door life. The principal hotel is the Lafayette, which is capable of accommodating 1,200 guests, and is equaled in size, architectural beauty, and the comforts it affords, by very few of the great summer-resort hotels of the East. The Lake Park Hotel has room for about 500 guests, the St. Louis for about 300, and numerous other summer hotels and private cottages have summer boarders. A fleet of nearly a score of steamboats, large and small, ply upon the lake, and hourly trains are run during the season to and from St. Paul and Minneapolis.

**The Mammoth Flour Mills.**—It is aptly said that the history of the flour mills of Minneapolis is like the story of Aladdin. In 1860 the product was 30,000 barrels, and in 1885, 5,473,000 barrels. There are twenty-six mills in operation, the maximum daily capacity of all being 32,000 barrels. An idea of the gigantic proportions which this branch of industry has assumed may be obtained by remembering that the number of barrels of flour manufactured by one of the largest mills in the course of twenty-four hours is greater than that produced by an average-sized mill in the course of a year. The capacity of the largest mill, the Pillsbury "A," is 5,200 barrels per diem; that of the Washburn "A," 3,000 barrels; and six other mills range from 1,200 to 2,000 barrels a day. The estimated quantity of wheat required to supply these mills in 1882 was 18,000,000 bushels. The capital invested in the flour-milling industry is enormous, and the amount is constantly increasing. This is the result of the changes in the mode of manufacturing flour, which have been almost radical within the past few years. The use of the old mill-stone has given place to the system of gradual reduction by iron rollers. The new process has not only raised the grade of flour, from the dark and inferior quality formerly produced, to the standard of the best Hungarian fancy brands, but has increased the quantity obtained from the grain, as well as the capacity of the mills: thus better

flour is now made at less expense than that which the inferior quality previously cost to manufacture. The flour of the Minnesota mills finds a ready market in all the Eastern cities, and also in Great Britain, France, Germany, Holland, Spain and Italy. Single orders are frequently taken for from 10,000 to 15,000 barrels, and the millers find it necessary, in securing the best trade, to control a great manufacturing capacity. Otherwise they would not be able to fill large orders promptly, nor obtain that uniformity in quality without which both the foreign and American market would soon be lost. Moreover, there is economy both in the construction and operation of a large mill over a small one. For example, the cost of one mill with a capacity of 4,000 barrels daily, is much less than that of sixteen mills of 250 barrels capacity, or of eight mills of 500 barrels capacity, or even of four mills of 1,000 barrels capacity. The relative cost of operating a large mill is still less, and the chance of a uniform grade of flour is increased in the same ratio as the capacity of the mill. So medium-sized mills, a few years ago considered the safest and most profitable, have been superseded by those of great capacity.

In order that some idea of a large Minneapolis flour mill may be obtained, the following facts relating to the Pillsbury "A" mill are given. This establishment is 180 feet in length by 115 in width, the building material being Trenton limestone, rock-faced, and laid in courses to the height of seven stories. Inside, on the basement floor, is a stone wall, 125 feet in length and 15 in height, which holds the water from the canal after its passage from the falls before it descends to the wheels. Within this canal are the wheel-pits, dug out of the solid rock, fifty-three feet in depth. Inside these pits are flumes of boiler iron, twelve feet in diameter, in which two fifty-five inch wheels, each weighing, with the shafting, thirteen tons, are placed. The hydraulic power of a column of water twelve feet in

diameter, with a fall of fifty-three feet, is enormous. Only the strongest and toughest metal could withstand the strain. Seventeen thousand cubic feet of water rush down each flume every minute, and the combined force of the wheels is estimated at 2,400 horse-power, equivalent to that of twelve steam engines, each of 200 horse-power. This power is geared and harnessed to the machinery requisite to grind 25,000 bushels of wheat in every twenty-four hours. On the first floor there are the main shafts of the driving apparatus, with pulleys twelve feet in diameter, weighing 13,000 pounds, over which runs belting of double thickness, forty-eight inches wide, at the rate of 4,260 feet in a minute. From the shafts also run thirty-inch belts perpendicularly to the attic floor, over eight-foot pulleys, at the rate of 2,664 feet per minute, furnishing the power which drives the bolting and elevating machinery. There are other pulleys and belting attached to the shafts for operating the rollers and purifiers, the electric light and other machinery. On this floor, also, is the wheat bin for stowing grain. This holds 35,000 bushels, and extends through to the ceiling of the floor above, where it is connected with the weighing hopper. On the second floor the wheat is ground; the third floor is mainly devoted to packing; the fourth, fifth, sixth and seventh floors are filled with bolting chests, middlings-purifiers, bran-dusters and other machinery. Before going to the rollers to be ground into flour, the wheat is cleansed by passing through eight different sets of machinery. It is purged in this manner of wire, nails, cockle, small and imperfect kernels, and becomes actually polished before it is converted into flour. On the packing floor the flour is discharged constantly from twenty-four spouts, and accumulates so fast that a car is either loaded with flour or bran every twenty-five minutes throughout the day. Any lack of transportation facilities at once clogs the mill. To every bushel of wheat there are thirteen pounds of bran or shorts; but for this "offal" there is a steady demand on the



part of stock-raisers in the East. There are railroad tracks on either side of the mill, and the loading and unloading methods are complete. The establishment is provided with fire apparatus, electric lights, passenger elevator, machine shop, and every appliance for its convenient working. In fact, it is one of the model flouring mills of Minneapolis, and the visitor who examines its features in detail will be well repaid.

The process of manufacturing flour in a typical Minneapolis mill is clearly described by Ernest Ingersoll, in *Harper's Magazine* for June, 1883:

"When the wheat comes in, it is unloaded from the cars, by the aid of steam shovels, into a hopper bin, whence it is elevated to the fifth floor, and fed into a receiving bin, the bottom of which extends down to the fourth floor. Out of this it empties itself into conveyors, consisting of small buckets, traveling upon an endless belt, and is taken to storage bins on the first and second floors. Here it rests until wanted for milling. When this time comes the wheat travels by conveyors to the top floor, whence it is fed down into the grain separators in the story beneath, which sift out the chaff, straw, and other foreign matter. This done, it descends another story upon patented grading screens, which sort out the larger-sized grains from the smaller, the latter falling through the meshes of the screen, after which the selected portion drops into the cockles on the floor beneath, and, these escaped, falls still further into the brush machines. All this time the wheat remains wheat,—the kernel is entire. Its next move, however, begins its destruction; for now the ending stones are encountered, which break the germinal point off each grain. This matter accomplished, the wheat is shot away up to the attic again, and, traversing the whole length of the mill, falls into an aspirator on the seventh floor; having passed which, it slides down to the second floor, and is sent through the corrugated rollers. These rollers have shallow grooves cut spirally upon them, with rounded ridges between. The opposing rollers are grooved in an opposite direction, and it is impossible for a grain of wheat to get through without being cracked in two, though the rollers are not sufficiently near together to do much more than that.

It comes out of this ordeal looking as though mice had chewed it, and, pouring into special conveyors, speedily finds itself up on the seventh floor again, where the flour dust which has been produced by this rough handling is bolted out in reels, and all that is left—no longer *wheat*—is divided into 'middlings' and 'tailings.' The tailings consist of the hard seed-case and the refuse part, and go into market as 'feed' and 'bran,' while the middlings are reserved for further perfection into flour: they are the starchy, good centres of the grains.

"The first operation toward this end is the grading of the middlings, for which purpose they pass upon silken sieves arranged in narrow horizontal troughs, and given a gentle shaking motion by machinery. There is a succession of these bolting cloths, so that the middlings pass through ten gradings. Next they go to a series of purifiers, which resemble fanning machines, and thence to corrugated rollers, each successive set of which are more closely apposed, where the meal is ground finer and finer. There are five of these corrugations in all, and between each occurs a process of bolting to get rid of the waste, and a journey from bottom to top of the mill and back again. Nevertheless, in spite of all this bolting, there remains a large quantity of dust, which must be removed in order to make the flour of the best quality. And hereby hangs a tale of considerable interest to Minneapolis men.

"In the old mill which not long ago occupied the site of this new one there stood upon one side the usual rows of buhrs, in this case twenty in number. Through the conveyor boxes connected with them was drawn a strong current of air that took up all the fine particles of flour dust, and wafted it with the strength of a tempest into two dust-rooms, where it was allowed to settle. The daily deposit was about three thousand pounds, which was removed every morning. In addition to these small chambers, there were several purifiers on the upper floors, that discharged their dust right out into the room. The atmosphere of the whole mill thus became surcharged with exceedingly minute and fuzzy particles, which are very inflammable, and, when mixed in certain proportions with the air, highly explosive. This mixture had apparently been brought by the millers to just about the right point, when fate supplied a torch. A piece of wire fell between the buhr stones, or into some rollers, and began a lightning express

journey through the machinery, in the course of which it became red hot, when it found an exit, and plunged out into the air. It was a most startling instance of the conversion of heat into motion. A lighted match in a keg of powder is the only analogy to illustrate the result. One room down-stairs burst into flames, and the watchman had only time to pull the electric fire alarm near his hand, when he and the mill together disappeared from the face of the earth. A terrific explosion, generated throughout that great factory in an instant, rent all parts of the immense structure as suddenly as a child knocks over a tower of cards, leaving nothing but blazing ruins to show where, a twinkling before, had stood the largest flour mill in the country. Nor was this all. The land was dug from under the foundations, and the massive machinery buried out of sight. Two other mills and an elevator near by were demolished, so that not one stone remained above another; while of three other mills, cracked and tottering walls and charred interiors were the only mementoes of the day's flourishing business.

"The good that came out of this seemingly wholly harmful episode, which scratched an end mark to one era of the city's prosperity, was the introduction into the new mills of a system of dust-saving that renders such a calamity improbable, if not impossible, in future. Now, instead of being thrown abroad into a large room, the dust is discharged by suction pans into close, fire-proof receivers, where it accumulates in great quantities, and is sold as a low grade of flour. This dust having been removed, what remains is the best quality of flour. It is barreled by the aid of a machine permitting the precise weight of 196 pounds to be determined, packed and branded with great speed.

"Bakers, however, use what is known as 'wheat' or 'straight' flour, which is the product of the five reductions, all the subsequent processes through which the middlings pass in making fine flour being omitted. 'Fancy' flour differs from the ordinary superfine in that the middlings are ground through smooth rollers."

## ST. PAUL DIVISION.

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ST. PAUL TO BRAINERD.—DISTANCE, 136 MILES.

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Between St. Paul and Minneapolis, ten miles, the Northern Pacific runs through the suburban or rather inter-urban villages of Como Park, Warrendale Park and St. Anthony's Park, passing the new State Fair Grounds, and the new Northern Pacific shops in the vicinity of Hamline University. It crosses the river just below the Falls of Saint Anthony on a superb bridge of masonry, which ranks among the finest railway viaducts in the United States, and then runs into the new depot in the heart of the city. After leaving this spacious, handsome depot, the road passes through the extensive yards of the company, and by its large freight house across the Mississippi on a substantial iron bridge of five spans resting upon masonry piers. The first station is *North Minneapolis*, in the suburbs of the city.

After leaving Minneapolis, the course of the railroad, following the east bank of the Mississippi river, is somewhat west of north, the route being through a level or gently undulating region. The surface of the country is, however, diversified by lakes, rivers and small tracts of prairie and growths of hardwood timber. The first important town is

**Anoka.**—This town, the county seat of the county of the same name, is situated twenty miles from Minneapolis, at the mouth of Rum river, one of the most important logging streams in the Northwest. Anoka has 6,000 inhabitants, and is a flourishing manufacturing town, being principally engaged

in the sawing of lumber and the grinding of wheat. It has numerous churches, excellent schools, newspapers and hotels.

**Itasca**, 36 miles from St. Paul, population 300, has a good water-power, an hotel and a number of stores. *Elk River*, 41 miles from St. Paul, population 1,300, is the county seat of Sherburne county, and is located on the Mississippi at the mouth of the Elk river, a logging stream heading in the great pineries. The town has a water-power, three hotels, two public halls and newspapers, churches and fifteen stores. *Princeton*, a village of 1,200 inhabitants, which is the headquarters of the lumbermen of the upper Rum river, is 19 miles to the northward, and is reached by stage. *Big Lake Station*, nine miles further, deriving its name from the beautiful sheet of water on which it is situated, is the nearest point to the German and Swedish settlements near *Eagle Lake*, some miles distant. *Becker* and *Clear Lake Stations*, the next halting places, afford outlets to a rich farming and grazing region, which stretches away on both sides of the Mississippi, for many miles of its course, and whence large quantities of wheat and dairy products are shipped to the markets of Minneapolis and St. Paul. The populous agricultural and milling towns of *Groton*, *Monticello*, *Clearwater*, *Buffalo*, county seat of Wright county, and *Fairhaven*, are embraced in the area tributary to the railroad stations named.

**East St. Cloud**, 76 miles from St. Paul, is a suburb of the active manufacturing and commercial town of St. Cloud (population 4,000), which is situated on the west bank of the Mississippi, and with which it is connected by a fine iron bridge. One of the main lines of the St. Paul, Minneapolis & Manitoba Railway runs through St. Cloud, and a branch diverges which runs to Hinckley, on the St. Paul & Duluth road. Near East St. Cloud are extensive granite quarries which produce an excellent building material. Two miles beyond is the town of



**Sauk Rapids** (75 miles northwest from St. Paul ; population, 1,200).—The village of Sauk Rapids, the county seat of Benton county, lies on the east bank of the Mississippi river, at the falls of Sauk Rapids, from which its name is derived. The Mississippi river at this point is 600 feet wide, and has a fall of eighteen feet in one mile. The place is of much importance on account of the extensive beds of granite in its immediate vicinity, the stone, it is said, being equal to the celebrated Quincy granite of New England, varying only in color, and also for the reason that a fine water-power is furnished by the rapids which begin where the Sauk river enters from the west, at the upper end of the village. The rapids continue over a bed of granite a distance of half a mile, and, viewed from either bank, present a picture of great beauty. A substantial bridge, crossing the river just below the main falls, affords a fine view of the scenery above and below. The village has a graded school, three churches, four hotels, two flouring mills, with a capacity of 500 barrels daily, a saw mill, four general stores, a large hardware store and workshops.

**Rice's** (88 miles from St. Paul ; population, 200).—Rice's is situated in Benton county, one and a half miles east of the Mississippi river, and two miles north of Little Rock Lake. It is in the midst of a good farming community, and is the point of departure for the Rum river lumber regions. It has five general stores and two good hotels, capable of accommodating 100 guests each. Lumber and wheat are the principal exports. There is good hunting and fishing in the neighborhood.

**Royalton** (95 miles north of St. Paul ; population, 250).—Royalton was founded in 1880. It is situated two miles east of the Mississippi river, in the midst of a prairie dotted with groves of hard-wood trees. The population, composed of Americans, Germans and Swedes, is enterprising, and the town

is growing fast. There are two churches ; a good school ; a saw mill with a capacity of 20,000 feet per day, which may be easily increased ; two hotels ; two grain warehouses, each capable of storing 8,000 bushels ; a steam elevator, close to the railroad track, with a capacity of 30,000 bushels ; a livery stable, and numerous stores and shops. Two excellent mill sites, well adapted for the manufacture of flour, are offered by the Platte river, a pleasant stream which skirts the town. A large amount of wheat is annually shipped from the station by the surrounding farming population. There are three lumber settlements on the west side of the Mississippi, in the heart of the hard-wood timber region, within six miles of Royalton, named North Prairie, Two Rivers and Elmdale. These places are tributary to Royalton, employing hundreds of teams in hauling logs, cordwood and railroad ties to the station. Every year thousands of cords of hard wood, principally maple, are shipped, and the railroad draws largely upon the neighborhood for ties, thousands of which are piled up on either side of the track. Hunting and shooting in this vicinity present their attractions. Deer are plentiful, and feathered game so abundant that prairie chickens, wild geese, ducks and grouse are shipped in quantities during the season to the markets of St. Paul and Minneapolis. *Portland*, five miles beyond, is simply a side track.

**Little Falls** (105 miles northwest of St. Paul ; population, 1,100).—This town is nicely situated on the east bank of the Mississippi, thirty-one miles south of Brainerd. It has two newspapers, good hotels, schools, churches and general stores. It is the junction of the Little Falls & Dakota Division of the N. P. R. R. with the main line, and is also a depot for the various lumbering firms which have camps in the neighborhood. The town is in Morrison county, and takes its name from the falls at this point in the Mississippi river, which, if utilized, would furnish water-power only second to that in Minneapolis.

The scenery is diversified and interesting. Finely wooded bluffs cropping up between rich prairies make the neighborhood favorable for hunting. Five miles east is a pleasant inland lake named *Rice Lake*, from the large quantity of wild rice growing around its shores. This is a resort for wild ducks, and in season large numbers are bagged. The woods abound with partridge, and the prairies with grouse, or prairie chickens, while deer are found in great numbers within easy distance.





## LITTLE FALLS AND DAKOTA DIVISION.

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FROM LITTLE FALLS TO MORRIS.—DISTANCE, 88 MILES.

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This branch runs in a course slightly south of west, traversing first the wooded country which skirts the western bank of the Mississippi, and then coming out into a fine rolling prairie country, dotted with numerous lakes.

**La Fond** (7 miles from Little Falls; population, 60).—This place contains a saw mill and a general store. The principal industry is lumbering, and shipments are made of lumber, wood, posts, piling, etc.

**Swanville** (16 miles from Little Falls; population, 120).—Swanville has one hotel, general stores in all branches of trade, elevator, and a saw mill. This is a thickly timbered region, and also well adapted to grazing.

**Grey Eagle** (26 miles from Little Falls; population, 260).—This town, although little more than a year old, shows signs of developing into a lively business place. There are two hotels, one saw mill, two general stores, a church and a school-house. The country is well wooded with fine hard wood, and the chief industry is the marketing of wood, ties and lumber. The woods are well stocked with game, and the many beautiful lakes with fish. *Twin Lakes*, just east of the town, are situated near the railroad, and are a favorite resort for hunters and fishermen. *Mound Lake*, three miles northeast of the town, has a high, firm beach. Old fishermen say this is the best lake

in Minnesota for fishing. *Birch Lake*, lying one mile west and a half a mile south of the town, is noted for its fine gravel beach, and is considered the finest pleasure resort in the surrounding country. Upon the shores of the lake, an hotel has been built to accommodate the pleasure seekers who go there to spend the summer months, or to enjoy the fine hunting and fishing found in the vicinity. In Birch Lake, fish of from ten to twenty-five pounds weight are often caught.

**Spaulding** (29 miles from Little Falls; population, 100).—Spaulding has one good hotel, three stores and a saw mill. The shipments are lumber. The surrounding country is heavily timbered, and also affords good pasturage.

**Sauk Centre** (37 miles from Little Falls; population, 2,000).—This town is situated on Sauk river, at the outlet of Sauk Lake. It forms the natural geographical and business centre, and outlet, of an extensive area of rich agricultural country, well supplied with timber and water, and finely adapted to raising grain and stock, as well as to dairy purposes. The place is in a flourishing condition, and its enterprising citizens are building up a substantial business and commercial standing. There are Episcopal, Congregational, Methodist, Baptist, Roman Catholic and Lutheran churches. A fine brick school building was recently finished, in which eleven teachers are employed. Sauk Centre has two newspapers, two large flouring mills, two banks, numerous stores, machine shops, manufactories of agricultural implements, and also a water-power that might be used far more extensively. The railroad crosses an arm of Sauk Lake; but only a small part of it can be seen from the cars. The lake is twelve miles in length, and is partially hidden by a point of land projecting into it. There is very good pickerel, bass and perch fishing. Prairie chickens are found only a short distance from town, and, in season, ducks and geese come by thousands to the marshes west of and along the line of the railroad.

**Westport** (48 miles from Little Falls; population, 50) is quite a new place, containing an elevator for the storage and shipment of wheat. The soil of the surrounding country is rich and fertile, adapted to raising all kinds of farm products.

**Villard** (53 miles from Little Falls, and 116 miles from Minneapolis; population, 450).—This village, named after the ex-President of the Northern Pacific Railroad, is situated in Pope county, and dates from 1883. The growth has been steady, there being now three churches, schools, the usual stores, and all other appurtenances of a thriving village. The soil of the surrounding country is a black loam, with clay subsoil. Farmers bring their wheat twelve miles to the village for shipment, and large quantities are forwarded to market. The chain of lakes near the village are: Lake Villard, one and three-fourths of a mile north and south, and one and one-fourth of a mile wide; Lake Amelia, four miles long by one mile wide; Lake Levan, two miles long by one and one-half miles wide; Lake Ellen, one and one-half miles long by one and one-third miles wide. These lakes are all connected. Their banks are lined with maple and oak of heavy growth; the waters are pure and clear, and the bottoms gravelly. They all abound with black bass, which makes them one of the best fishing grounds in the entire section. There are plenty of water fowl, and, in fact, there is no end of amusement for the sportsman. Between two of the lakes, for a distance of nearly one mile, the railroad track runs, there being just room enough for a single track,—the roadbed sloping down on either side to the water. From the car windows the view makes a very pretty picture.

**Glenwood** (60 miles from Little Falls; population, 500), the county seat of Pope county, is situated in a small circular valley at the eastern extremity of Lake Minnewaska. It has two hotels, three stores, two newspapers, and a brick yard. The hills on the north and east rise 280 feet above the level of the

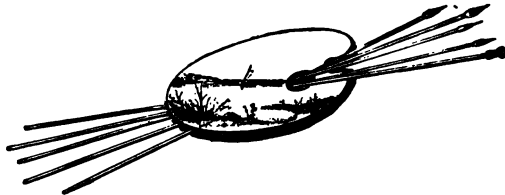
lake, and a little above the surrounding prairie. These eminences are cut up with deep wooded dells or ravines, through which flow clear creeks of spring water, pursuing their way across the valley to the lake below. The railroad station is prominently situated 200 feet above the valley, and offers a pretty view of the village, with its substantial brick court house, school building and church, its neat residences, and the silvery lake, whose shores are fringed with oak and maple. Lake Minnewaska, now in sight from the cars between Glenwood and Starbuck, and anon hid from view by hills or groves of timber, has a clean gravelly beach, which affords a delightful drive, over six miles in length, shaded by a growth of forest trees. The lake abounds in fresh-water fish of all kinds. Many times in spring, wagon loads are taken away, the result of a night's or day's fishing. Many springs gush from the hill slopes on the north shore of the lake, within half a mile to two miles from its eastern end. Some of these springs are pure, sweet water, while others contain iron and potassium, or are strongly impregnated with sulphur. One of these fountains, coming out of the bluff just behind the village, forms a considerable stream, which has been dammed by the owner, and made to furnish the power to operate his mill. Of the excellent medicinal properties of the mineral springs, there is ample evidence, as invalids using the water will testify.

**Starbuck** (69 miles from Little Falls; population, 150).—The town of Starbuck, situated on the western end of Lake Whipple, at present comprises about 100 buildings, all erected after the railroad reached the place, in the autumn of 1882. Among them are an hotel, a drug store, a hardware store and five general stores. The town will doubtless have a large growth, as elevators, a second hotel, and stores of various kinds are in process of erection. The lake is ten miles long by three miles in width, and has a sandy beach which is partially skirted with timber. The fishing is of the finest in the State, pike

pickerel, red-horse, buffalo, bass and perch abounding in large numbers. Flocks of ducks and geese offer an excellent opportunity to the sportsman, as well as prairie chickens in their season.

**Scandiaville** (79 miles from Little Falls; population, 100).—This place, growing rapidly, has one hotel, an elevator and general stores. The country is well suited to farming, and an abundance of small game is found in the vicinity.

**Morris** (88 miles from Little Falls; population, 1,500).—Morris, the county seat of Stevens county, is the present western terminus of the Little Falls and Dakota branch. The town has four churches, a graded school, a public hall, two banks, three good hotels, one newspaper, two flouring mills, three elevators, and a large number of business houses. It is in a prosperous condition, and is fast becoming an important city. A good quality of cream-colored brick, manufactured here, is used in the construction of the buildings. A new court house with jail has been erected, costing \$20,000. The chief industries of Morris are stock-raising and agriculture. The shipments are wheat, barley, oats and corn. There are several lakes well stocked with fish in this vicinity, and flocks of prairie chickens, snipe, plover and ducks, are found here in their season.



## ST. PAUL DIVISION.

*[Continued from page 49.]*

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**Belle Prairie** (109 miles from St. Paul; population, 800).—This town, in Morrison county, four and a half miles north of Little Falls, on the east bank of the Mississippi, derives its name from the beautiful, level strip of prairie, about twelve miles long, and varying from two to four miles in width, upon the edge of which it is situated. The soil of Belle Prairie is a rich, black sand, and well adapted to all kinds of agricultural products, especially wheat, potatoes and garden vegetables. The population of the country tributary to Belle Prairie is 1,000, the majority being French Canadians, who are mostly engaged in agricultural pursuits and lumbering. There are here an hotel, a postoffice, stores and shops, an elevator, a public hall, district schools, a Roman Catholic church, and a convent, with which a school attended by fifty scholars is connected. This town is one of the oldest settlements of northern Minnesota. Mr. Frederick Ayer, the missionary, settled here in 1848, and erected a commodious school-house for the education of Indian children.

**Fort Ripley** (119 miles from St. Paul; population, 100).—This station derives its name from the now unoccupied fort, distant one mile, on the west bank of the Mississippi river, which, in the time when Minnesota was occupied in a great part by the Sioux Indians, was an important frontier military station. The old block house and barracks are still standing. It is the shipping point of a rich lumbering and farming

region into which settlers are rapidly entering. *Albion*, five miles beyond, is only a siding; *Crow Wing*, 128 miles from St. Paul, is an unimportant station, but has interesting associations in connection with the Indian history of the region.

**Brainerd** (136 miles from St. Paul, and 114 miles from Duluth; population, 7,000).—Brainerd, City of the Pines, is situated on the east bank of the Mississippi river, on the main line of the Northern Pacific Railroad, at an elevation of 1,600 feet above the sea. It embraces within its limits an area of about 1,500 acres, and is platted parallel to and at right angles with the railroad on either side, in the midst of the pine forest, being one of the most important, picturesque and attractive towns on the line of the railroad, north of Minneapolis, and west of the great lakes, in Minnesota. There are seven church organizations, each worshipping in its own edifice; three school buildings, one of them a noticeably handsome structure; a court house and jail, a fine four-story brick hotel and several small hotels, two weekly newspapers, a fine opera house, and a public hall. Approaching the town from the south and east, the eye is attracted by the lofty smoke-stack (110 feet high) of the railroad company's shops, which here cover an area of about twenty acres, and consist of a round-house, containing forty-four stalls; machine shop, with capacity for handling twenty-two locomotives at once; boiler shop, copper shop, blacksmith forges, foundry and numerous other accessories of the headquarters of the motive power of a great railroad. Passing by this busy hive of industry, going west, the traveler is at once ushered into the business portion of the city, which stretches along parallel to the track on the south side for a distance of nearly half a mile. On the north side of the track are obtained glimpses, through the timber, of picturesque residences, the Episcopal and Congregational churches; Gregory Park, inclosing ten acres of stately

piners; and the court house and jail, erected at a cost of \$30,000. Here also is the imposing building belonging to the railroad company, and occupied as the headquarters of division offices. The Brainerd Water and Power Company, with a paid-up capital of \$100,000, supplies the city with water from the Mississippi river, and also contemplates furnishing the city and shops with the electric light. The Villard House contains 80 rooms, with all modern improvements. There is here a steam saw mill, employing a capital of \$200,000, whose output of lumber in 1882 was 16,000,000 feet, and 25,000,000 shingles and lath; a brick yard with a plant valued at \$30,000, which has large contracts already in hand for bricks for local use alone. The railroad company has here a large general hospital for the use of its employes who may be disabled by sickness or accident.

Brainerd is the gateway to the vast lumber region north and east to the sources of the Mississippi. Good wagon roads penetrate the forest in all directions, and a stage line and semi-weekly mail service is maintained to *Leech Lake* and *Lake Winnebago*, which the United States government is converting into huge reservoirs, at an expense of half a million dollars, to regulate the stage of water in the upper Mississippi. Leech Lake contains an area of 200 square miles, Winnebago half as much more. During the season of navigation a small steamboat plies between Aitkin and Pokegama Falls, where the Mississippi takes a sudden leap of seventeen and a half feet, around which is a short "carry," or portage, whence a small government steamer penetrates to the government works above. A hundred lakes, at varying distances of three to twenty-five miles from Brainerd, and of easy access, are stocked with black bass, wall-eyed pike, pickerel, mascalonge and other varieties of fish, all of exquisite flavor; numerous rice lakes afford breeding places for myriads of water fowl, while the forest is full of game and fur-bearing animals. Red



deer and pheasants may be taken by the sportsman, within easy strolling distance of the town; and a black bear, wolf or wolverine often add piquancy to the hunter's quest. There is an hotel at *Gull Lake*, twelve miles distant northwest, with accommodations for twenty guests, and at *Serpent Lake*, sixteen miles northeast, there are accommodations for perhaps an equal number. *Mille Lac Lake*, twenty-two miles southeast, is the largest, and perhaps the most charming, of all the Minnesota lakes. Embowered in a magnificent forest of butternut, ash, sugar maple and other hard woods, its solitude has rarely been disturbed by the sound of the woodman's axe. It has an area of nearly 400 square miles, and a gravelly beach skirts its shores for nearly 100 miles. This lake is the source of the Rum river; its waters teem with fish, many of which are of marvelous size; black bass of ten and twelve pounds each are often hooked. Its shores abound with game, attracted hither in the fall by the immense crops of mast in the forest, and wild rice in the thousand lakes. Openings in the forest, bits of prairie and meadow, produce wild strawberries, blueberries, raspberries and cranberries, hundreds of bushels of which are annually shipped from this station; the undergrowth is rich with ferns, and flowers and flowering shrubs of exquisite beauty.



## WISCONSIN DIVISION.

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FROM THOMPSON, MINN., TO ASHLAND, WIS.—DISTANCE,  
86 MILES.

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The Wisconsin Division of the Northern Pacific Railroad extends from Thompson, the point of junction with the main line, to Superior, and thence on eastwardly to Ashland, on Chequamegon Bay, Lake Superior. The length of this division is 86 miles, and Ashland is the extreme eastern terminus of the Northern Pacific system. The division traverses a heavily wooded country for its entire length. The forests consist mainly of pine, and important lumbering operations are carried on.

**Thompson** (population, 500) is situated near the head of the Dalles of the St. Louis river, and is the county seat of Carleton county. The St. Paul & Duluth road joins the Northern Pacific at this point, and from Thompson to Duluth the railroad is the joint property of the Northern Pacific and St. Paul & Duluth Companies. The chief business of Thompson is the manufacture of lumber.

**West Superior.**—The district of Superior fronting upon the Bay of St. Louis, and facing the city of Duluth, is known as West Superior. It was laid out in 1884 by a strong company, which cleared away the forests, drained the ground, and platted the town, and made other important improvements. This was done with the idea that a much larger city is destined to grow up at the head of Lake Superior than can find convenient space for its commercial and manufacturing

operations within the limits of Duluth. The situation of West Superior, on a handsome level plateau, with extensive water frontage, is peculiarly favorable for commercial activity, and especially for railway terminal purposes. The Northern Pacific bridge across the bay gives easy communication with Duluth. The growth of West Superior has been very rapid. In 1885 the place had two hotels, a newspaper and numerous business houses. It is believed by far-sighted observers of the commercial movements centring at the head of the lake, that all the territory now occupied by Duluth, Superior and West Superior, will be required for the city that will grow up in the near future.

**Superior.**—The city of Superior, in Douglas county, Wis., is situated on the Bay of Superior, near the extreme western end of the great lake. It shares, with the neighboring city of Duluth, the advantage of being at the head of navigation of the great lake system of the United States. Its sheltered, deep and spacious harbor, coupled with the fact that a rich and extensive region is tributary to its commerce, will in time make Superior an emporium of trade and industry. The entrance to Superior Bay, 500 feet wide, is flanked on either side by substantial piers and breakwaters, that have been constructed by the government of the United States. Beyond the entrance, the bay expands to a width of more than a mile, and to a length of nearly ten miles. This fine harbor furnishes twenty-five miles of available coast line for the accommodation of commercial and manufacturing establishments, every point of which is well protected from the most severe winds that vex the outer sea. The shores of this bay are already marked, at many places, with extensive flouring and lumber mills and other factories, and there is a constant growth of industrial enterprise. The city of Superior, fronting upon the bay, was projected and laid out before the civil war by a company of well-known citizens, among whom

may be named: Wm. V. Corcoran, of Washington, D. C.; Robt. J. Walker, of New York; Geo. W. Cass, of Pittsburgh, Pa.; Horace S. Walbridge, of Toledo, O.; D. A. J. Baker, of St. Paul, Minn.; James Stinson, of Chicago, Ill.; Senator Bright, of Ohio; Senator Beck, of Kentucky; and J. C. Breckenridge, of Kentucky, formerly Vice-President of the United States. Stephen A. Douglas, after whom the county is named, was also interested in Superior in its early days. The idea, therefore, of building a city at the head of Lake Superior, on the bay, is not altogether new, although the development of the plan was left, on account of intervening national disturbances and financial complications, to the later generation which is now engaged in maturing it. Superior is already in communication with both eastern and western points by rail. The Northern Pacific Railroad here connects with the Chicago, St. Paul, Minneapolis & Omaha system, for Chicago and the East. The Northern Pacific Railroad Company has built a large dock for the convenience of its freight business.

Among its manufacturing and industrial establishments, Superior has two large lumber mills, with a capacity of 100,000,000 feet of planed lumber a year; a shingle mill able to produce 1,800,000 shingles in a week; several grist mills and machine shops, two brick yards, a large grain elevator, and an extensive coal dock. The town has eight churches; five school buildings, valued at \$30,000; a court house and other substantial county buildings; six hotels, two of which are first class; a national bank, a telephone system and two newspapers.

The Northern Pacific Railroad enters the city on the south, by Newton Avenue, and runs down to the bay, whence one branch is laid along the harbor line to Conner's Point and St. Louis Bay, whence it crosses to Duluth by a fine iron bridge, and another across the Nemadji and Alloues rivers to Itasca Street switch, on the east side of the city, tapping all the mills and manufactories in its course.

Among the principal scenic attractions that are visible from the cars between Superior and Northern Pacific Junction, on the main line, are the long trestle bridge; Silver creek, a famous trout stream; Rock Cut, in the Copper Range; the two Pokegama rivers, which are crossed by lofty bridges, and where the views are wild and grand; the Nemadji river, quiet and gentle as it winds its way through pleasant woods and fertile meadows; Alloues or Bluff river, with its precipitous banks and deep and rapid stream; the Bay of Superior, landlocked by Minnesota and Conner's Points; St. Louis Bay and the Bay of Shelter, at the mouth of the St. Louis river, flanking the city on the right; and, beyond all, the sublime spectacle that meets the eye at the Dalles of the St. Louis river, where the stream tumbles in impetuous fury from the craggy range above. There are, also, minor objects of interest in the neighborhood of Superior. These are the Bay of Alloues, on the left of the town, a place noted for its quiet waters and the fine hunting about its shores; the rice fields of the St. Louis and Nemadji rivers; the picnic woods of Wisconsin Point; the commanding view from the Edwards Copper Mine of Lake Superior and its north and south shores; the fish-breeding ponds of the Aminicon river; the beautiful Brule river glens; the white birch plantations on the banks of Poplar and White rivers, and the Aminicon, Nimekagon and Nebagamain Lakes. One of the greatest of natural scenes is the magnificent Black River Fall, ten miles south of Superior, and only a few miles distant from the track of the Northern Pacific Railroad. This cataract is 210 feet in height, and the water is of ebony blackness. It is one of the most interesting and awe-inspiring sights in the Northwest. The Aminicon Falls, 110 feet high, are also noted for their grandeur. The forests in the vicinity abound in deer, bear, and other large and small game, and the streams and lakes afford excellent trout fishing.

A little village with a good hotel has grown up on Nebaga-

main Lake, and another summer hotel is to be built on one of the points of the bay. There are some relics in the vicinity of the old posts of the Hudson's Bay Company, which tourists of an exploring turn like to visit. *Walbridge* and *Carlton* are yet unimportant stations.

The stations on the Wisconsin Division between Superior and Ashland are as follows: Chicago, St. Paul, Minneapolis & Omaha Junction, Moquat, Ino, Topside, Iron River, Muskeg, Brule, Blueberry, Maple Ridge, Midland, Cutter.

**Ashland** (population 4,000), county seat of Ashland county, Wisconsin. This prosperous town has a beautiful location on the picturesque Bay of Chequamegon, facing the Apostle Islands. It has an excellent harbor and considerable lake commerce. It is the northern terminus of the Wisconsin Central Railroad, running to Milwaukee, and to many important towns in the centre of the State. The Milwaukee, Lake Shore & Western Railroad also terminates here. The Chicago, St. Paul, Minneapolis & Omaha system has a line extending from St. Paul to Washburn, a few miles distant, across the bay from Ashland.

The eastern terminus of the Northern Pacific is at Ashland. The place has, therefore, an importance as a railway centre which is constantly increasing with the development of the Northwest. Ashland has a great reputation as a summer resort. It has a number of hotels; the Chequamegon House is one of the best summer hotels in the country, and is filled with guests during the warm season. The cool breezes from Lake Superior make the summer climate always agreeable, and the opportunities for yachting, rowing and fishing upon the beautiful water, and for drives through the pine forests, render Ashland a delightful place in which to spend the summer months. The chief business of the town is in lumber operations and with lake commerce. It has good schools, numerous churches, two newspapers, banks, stores, and a number of manufacturing establishments.

## MINNESOTA DIVISION.

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FROM DULUTH TO BRAINERD.—DISTANCE, 114 MILES.

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**Duluth** (population, 14,000).—This is an important terminal point of the railroad, and is the most western of all the cities which lie on the great chain of North American lakes. It is the county seat of St. Louis county, and one of the most flourishing and rapidly developing places of the Northwest. The financial storm of 1873 swept over Duluth, and sadly checked its growth during many years; but it has fully recovered from the shock, and is now advancing with rapid strides to a position of commercial and industrial pre-eminence. Its principal trade is the famous hard wheat, the market for which product is constantly enlarging. To handle the grain, there are five elevators and two large storage houses at Duluth, with a united capacity for storing 2,660,000 bushels; and, during 1885, not less than 7,000,000 bushels were received and shipped. The harbor is deep, sheltered, and capacious enough to accommodate a large number of vessels, and the wharf facilities are excellent. Maritime business is fast assuming great importance; the arrivals and clearances during the navigation season are about 2,500. Duluth is also the centre of a large lumber industry. In 1883 the twelve saw mills of the city manufactured over 100,000,000 feet of lumber, about 25,000,000 shingles and 10,000,000 lath. Duluth has excellent schools, many fine churches, imposing business houses, elegant residences; a fine opera house, one of the handsomest

buildings in the Northwest; two daily newspapers, and other features of a thriving city.

Duluth has become, in recent years, an important railroad centre. It is now the terminal point for both the Wisconsin and Minnesota divisions of the Northern Pacific, the St. Paul & Duluth, and the Chicago, St. Paul, Minneapolis & Omaha roads, and also for a large freight business which comes off the St. Paul, Minneapolis and Manitoba lines by way of a branch road from St. Cloud to Hinckley. The dock and harbor facilities are now the best of any city on the lakes.

The Duluth & Iron Range Railroad gives it a northerly line to the great lumber and mineral region lying close to the Manitoba boundary.

Immense deposits of iron ore exist in this region, and are being extensively worked, the ore being brought down by the railroad to Two Harbors, about forty miles east of Duluth, thence being shipped to the manufacturing cities on the lower lakes. Numerous veins of silver ore have been found in the same region. Silver is also mined in the immediate vicinity of Duluth.

The important bridge of the Northern Pacific Road, across St. Louis Bay, connects the two cities of Duluth and Superior, making them virtually one commercial centre, and giving access to the elevators and wharves on both sides of the bay, to all the railroads centring at the head of Lake Superior.

The fisheries of Duluth are one of its most important industries. Whitefish and trout are caught in large quantities, and shipped to St. Paul and Minneapolis, and to all the Minnesota, Dakota and Montana towns as far west as the Rocky Mountains.

The historic period of Duluth dates from 1856-57, in which years J. B. Culver, Wm. Nettleton, Luke Marvin, Sidney Luce, Geo. R. Stuntz and others procured letters patent to the lands on the Minnesota side of the bay, and founded a village on



the site of the present city. But the first real impetus given to the place was in 1869, when the St. Paul & Duluth Railroad, then known as the Lake Superior & Mississippi Railroad, was nearly finished, with Duluth as the lake terminus. About this time the erection of the first substantial business blocks in the place was begun. Meanwhile, General Geo. B. Sargent had established himself at Duluth, as the agent of Jay Cooke & Co., and as the advance guard of the Northern Pacific Railroad. When, in 1870, this company began its great work of building a railroad across the continent, with Duluth as a base of operations, it caused the town to leap at once into prominence as a depot of supplies, a manufacturing point and wheat market. With the completion of the railroad to the Red River of the North, Duluth became an important port of entry for the Canadian transit trade to Manitoba and the Saskatchewan valley. From 1870 to 1873, Duluth was the scene of great commercial and some manufacturing activity. During this period the foundation of iron industries on a large scale was laid; a blast furnace was built, and foundries and car shops established,—car wheels having been cast in the foundries for the freight cars that were built in the shops; while boiler furnaces, and other heavy kinds of iron work, including stoves, were successfully manufactured. But the great commercial crisis of 1873-74 intervened, with its consequent cessation of all railroad operations, and ruinous deterioration of the iron interests generally, putting an effectual end to all manufacturing enterprises, and not only leaving the town commercially flat, but burdened also with a large bonded indebtedness. This debt was incurred to a great degree by the cutting of a canal through Minnesota Point into the harbor, and by the building of a useless but expensive dike across the bay to evade an injunction suit brought by the State of Wisconsin against the cutting of the canal in question. Under this vast burden of debt, Duluth staggered through five

years of great commercial depression. Meanwhile the Northwest, under the impulse of the revived energy of the Northern Pacific Railroad, began to develop into a great grain field, the country at large gradually recovered from its financial shock, and capital again sought investment. At Duluth large grain elevators\* were built; harbor slips were cut to accommodate the constantly augmenting merchant marine list, coal docks and freight houses were constructed, and lumbermen, becoming interested in the country, began the erection of first-class saw mills. Duluth was now once more the scene of intense commercial activity, increasing from a town of 2,000 inhabitants in 1857-58, to a population of 14,000 in 1883, and 20,000 in 1886.

If the above glance at the history of Duluth is interesting to the man of affairs, the situation of the town renders it no less interesting to the sportsman, on account of the fine trout streams; to the invalid, for the bracing and salubrious climate; and to the tourist, for its grand and picturesque scenery.

Situated at the extreme head of Lake Superior, and covering the sides of a prominent elevation, Duluth presents a bold and picturesque appearance, as it is approached either by water or by rail. The city will probably centralize midway between Minnesota and Rice's Point, in the neighborhood of its most rugged features, and, as it grows, will continue to develop those picturesque effects which are the delight of the artist. Minnesota Point alone, with its scythe-like curvature, and splendid sweep, is a feature in the landscape worth seeing, and a good carriage-way over the hills, from Duluth to Rice's Point, offers a place of vantage from which to behold a scene that for beauty, distance and effect is, perhaps, without an equal in the Northwest. From this drive, not only is a sweeping view of the lake, along the north and south shores, for some twenty-five miles to the eastward, to be obtained, but the gaze may also wander past the Bay of St. Louis, and over the marvelous labyrinth of crooks, windings, lakes and inlets of

the Spirit Lake region as far as Fond du Lac to the westward. Spread out beneath the feet are the Bay of Duluth and Superior, between Minnesota and Rice's Point, with Superior in the distance, accentuated by the massive outlines of the docks and elevators, the whole affording a variety of scenery which it would be hard to find elsewhere in a single view.

This part of Lake Superior is one of the most interesting points to the geologist on the North American continent. It is on good grounds considered the oldest region in the world. The theory is that the formation of the lake is due to some great volcanic action, long prior to the ice period; perhaps that the lake itself was the mouth of a great volcano. Duluth is built on the rim of this lake basin, upon foundations of trap and conglomerates of every conceivable description, with seams of quartz and veins of iron, copper and silver often cropping out at the surface. The ancient lake bed extends some twenty miles above Duluth, over Grassy Point, Spirit Lake, and the bed of the St. Louis river, as far as Fond du Lac, around which the lake rim curves, inclosing a region of striking beauty. The chain of hills is here cut through by the St. Louis river, causing that wonderful series of rapids, which, in a distance of twelve miles, have a fall of 500 feet through masses of slate, trap, granite and sandstone, and are fast becoming celebrated as the picturesque regions of the Dalles of the St. Louis.

The mean temperature of Duluth, during the summer, is as follows: June,  $57^{\circ} 9'$ ; July,  $61^{\circ} 9'$ ; August,  $63^{\circ} 6'$ ; September,  $58^{\circ} 5'$ . Summer visitors find here every convenience for fishing, hunting and sailing parties. Tourists and scientists usually have an abundance of time at their disposal, and are able at leisure to find out the most desirable localities. But there are many who come by lake, and have only a day to spare, or the brief period that a boat is waiting. To the latter class a trip to the Dalles of the St. Louis, via the N. P. R., is

one of the most profitable ways of spending the time. For the benefit of those who come by rail, and who delight in the "gentle pastime," a list of the trout streams on the north and south shores of Lake Superior, and their distances from Duluth, is appended :

NAME OF STREAM.	NORTH SHORE.	DISTANCE FROM DULUTH.
Lester river .....		5 miles.
French river .....		14 "
Sucker river .....		16 "
Knife river .....		21 "
Stewart river .....		32 "
Silver creek .....		33 "
Gooseberry river .....		38 "
Encampment river .....		41 "
Split Rock river .....		48 "
Cross river .....		85 "

The Gooseberry river is considered the best trout stream on the north shore, then Split Rock, and Stewart and Knife rivers, in the order named. Among the fine bays and islands most popular with tourists are Knife Island and Stony Point, Agate, Burlington and Flood Bays. Agate Bay, especially, is visited, and the name is very appropriate. Its shores are lined with agates, among an endless variety of other variegated and curiously colored conglomerates, all specimen chips from the neighboring rocks and hills, but worn more or less smooth by the perpetual friction and grinding of the wave-washed beach. The north shore is very precipitous, and abounds in fine scenery. Cascades and rapids are to be found on nearly all the above-named streams.

NAME OF STREAM.	SOUTH SHORE.	DISTANCE FROM DULUTH.
Aminicon river .....		12 miles.
Bardon's creek .....		20 "
Brule river .....		21 "
Iron river .....		26 "
Flag river .....		34 "
Cranberry river .....		40 "
Sand river .....		50 "

The scenery on the south shore is not so grand as on the north, and it is necessary to go further back from the lake to get trout ; but Sand, Brule and Iron rivers are excellent fishing streams.

On St. Louis and other bays in the neighborhood, are good trolling grounds for bass, pike, pickerel, etc.; and for the more venturesome there is trolling for lake trout in the vicinity of the bays and islands on the north and south shores. Ducks and wild geese abound in the season on St. Louis Bay and river, while deer have been found in greater number the last two winters than ever before. On the south shore are enough wolves to make deer hunting very exciting; bear are occasionally shot both on the north and south shores. Passing the unimportant station of *Rice's Point*, at a distance of four miles from Duluth, we come to

**Oneota** (population, 200).—This is an Indian name, meaning Beautiful Mountain. The town has a church (Roman Catholic), one store, and a saw mill of 8,000,000 feet capacity. Brook trout are caught in small streams in the immediate vicinity, and pickerel in the bay adjoining the town.

**Spirit Lake** (8 miles from Duluth).—Here the St. Louis river widens and is called a lake, out of which arises an island which tradition says is haunted. The legend is, that, in the early settlement of the Northwest, a captive white woman was cruelly tortured to death by the Indians, and her spirit was ever afterward seen hovering around the place, threatening death and destruction to the red man. However this may be, the fact remains, that none of the Indians in the vicinity can be induced to put foot on the island.

The scenery westward from this place to Thompson, a distance of fourteen miles, is very grand. As the train pursues its way, now speeding through deep cuts, over yawning chasms and bridges reared to a giddy height, the foaming waters rush madly on with a deafening roar through the Dalles of the St.



Louis far below, leaping from rock to rock, and enveloping them in clouds of spray. The river, in this stretch of about fourteen miles, has a fall of over 500 feet, and the views of the rapids and cascades from the car windows are exciting as well as picturesque in the extreme.

**Fond du Lac** (14 miles from Duluth; population, 200).—The town is beautifully situated on the St. Louis river, on the line of the St. Paul and Duluth and Northern Pacific Railroad. As a summer resort it has the attractions of fine scenery, and good hunting and fishing. It is one of the oldest settled towns in the State, the Hudson's Bay Company having established a trading post here in 1790. Wood, ties, cedar posts, telegraph poles and brown sandstone, of which latter there is an inexhaustible supply, are the principal articles of shipment. The St. Louis River Water Power Co.'s boom, in which the logs are assorted for the Duluth market, is located here, and a fine chance offers to see the singular expertness which the lumbermen attain in walking over the floating logs. The ease and rapidity displayed in skipping about over acres of footing so precarious are always a marvelous exhibition of skill, even to persons who daily witness the feat of stepping over revolving logs. The Water Power Company intend soon to construct a canal on the south bank of the river for the purpose of furnishing power to mills to be erected, the sites being among the most eligible in the Northwest. Fond du Lac has the ordinary supply stores, a shingle mill, a school-house and a postoffice. There is a mineral spring here, which is said to be unsurpassed for its medicinal properties. The surrounding country is rough and broken, and covered with a dense growth of timber. Deer, moose, bear, wolf, lynx and fox are among the game animals to be found in the vicinity. Two miles west of the station are the celebrated fishing grounds of the St. Louis river. Here, each spring, upon the breaking up of the ice, thousands of pounds of fish are caught, and shipped to

Eastern markets. Close to the fishing grounds, in a sharp bend in the river, is the scene of the last famous battle between the Chippeway and Sioux tribes of Indians, in which the latter were completely defeated, and routed with great slaughter, and their power forever broken in this region.

**Northern Pacific Junction** (23 miles from Duluth, 131 miles from St. Paul, and 91 miles from Brainerd; population, 600).—This is the junction of the St. Paul & Duluth and Northern Pacific Railroads, and a branch of the St. Paul & Duluth Railroad, known as the Knife Falls Branch, which runs six miles north to Knife Falls and Cloquet, where three saw mills are established, and large quantities of lumber are manufactured. Northern Pacific Junction has several hotels, one public hall, a church, good schools, and the county jail. It does a large business in supplying the numerous lumbering camps which are situated in the vicinity. Two saw mills are here, which run summer and winter, and are supplied with logs during the winter by a logging train. *Pine Grove*, 28 miles from Duluth, is only a side track. The same may be said of *Norman*, 33, and also of *Corona*, 39 miles from Duluth.

**Cromwell** (45 miles from Duluth; population, 75) is situated on a beautiful lake, which is stocked with pike, pickerel and perch. Cromwell has a section house, telegraph office, hotel and water tank. The principal shipments are wood and ties. Game: deer, bear, rabbits and grouse. *Tamarack*, 57 miles; *M'Gregor*, 66 miles; and *Kimberly*, 75 miles from Duluth, are small places of little importance except as points for the shipment of wood, ties, fence posts and telegraph poles, which are cut from the neighboring forests.

**Aitkin** (87 miles west of Duluth, and 27 miles east of Brainerd; population, 500).—The town has three hotels, three general stores, the usual shops, a public hall, churches, schools, two saw mills, a planing mill, a flour mill, a bank, and a weekly stage line to Grand Rapids, Minn. During the summer a

small steamboat runs up the Mississippi from Aitkin to Grand Rapids. The Mississippi river has its source in *Itasca Lake*, in the vicinity of which an immense lumber trade is carried on, the trees being cut into logs, and floated down the Mississippi to the Minneapolis mills. The Mud river rises twenty-five miles southwest, and flows through sixteen large lakes, which are full of fish. *Red Cedar Lake*, with its fifty miles of shore, and five other lakes of good size, situated four miles west of Aitkin, are excellent places for hunting and fishing. *Crystal Lake* is distant two and a half miles south. *Lake Mille Lac*, twelve miles in the same direction, is noted for its beauty; and all are well worth a visit.

The country around the lakes is surpassed by none in point of attractiveness to the eye, being undulating and park-like. The glades and meadows are spangled with wild flowers in great variety, and the pebbly shores of the lakes, and azure, transparent waters, present a scene which impresses the beholder by its rare beauty. The hunting here is excellent. Elk may be found within seventy-five to one hundred miles north of this point, and in the immediate vicinity of Aitkin are deer, bear, geese, ducks, pheasants, grouse and woodcock.

Visitors to this portion of Minnesota, desiring to see the red man in his wild way of living, may have their wishes gratified by driving out to the great and beautiful Mille Lac Lake and Chippeway Indian Reservation, about twelve miles from Aitkin. *Cedar Lake*, 92 miles west of Duluth, is only a side track.

**Deerwood** (97 miles west of Duluth; population, 30) is a favorite retreat for the hunter, and one of the wildest, least known and most beautiful points on the Northern Pacific Railroad. An unbounded forest stretches in every direction, in which deer and bear tempt the adventurous sportsman to share with the Indians the excitement of the hunt. The small streams and clear lakes, of unknown depth, invite the lover of



the rod to make his camp here. The invalid who craves repose, yet does not care to be too far away from the post-office or telegrams, finds here his Mecca. A small hotel has been built, and accommodation may also be found among the farmers at this point; or, if camping out is preferred, it is easy to obtain milk, eggs, ice, fresh vegetables and berries from the same source.

In a radius of three miles, there are over twenty known lakes, whose waters fairly teem with mascalonge, pike, black bass, whitefish, pickerel, croppies, wall-eyed pike, sunfish, rock bass, catfish, bullheads and suckers. It is not uncommon to take pike weighing upward of twenty pounds, and black bass six pounds, with a trolling spoon, while at the mouths of streams bass weighing from half a pound to two and a half pounds can be caught with the fly. The lakes vary in size from little gems a few hundred feet across, to larger ones of several miles in diameter, many containing islands. Some of them have high rocky shores, pebbly beaches, and deep blue water; others, fringed with a growth of wild rice, are the feeding and hatching grounds of numbers of wild fowl. The more distant lakes can be reached by pony and buckboard, or by birch canoes, the latter carried over portages.

There is a little trading post at this point, which, from its various shipments of furs, fish, venison, game, maple sugar, cranberries, raspberries and huckleberries, gives a very good idea of the resources of the adjacent country. Here, also, the civilized Indians can be seen at their several occupations, from making maple sugar and birch-bark canoes in the spring, to gathering wild rice in the fall, and hunting and trapping in the winter. The sportsman finds here in their season deer, with an occasional caribou, black and brown bear, wolves, foxes, coon, beaver, black and gray squirrels, the great northern hare, Canada grouse, wood ducks, teal, mal-

lards and bluebills. *Jonesville* (108 miles from Duluth) is a side track.

Six miles beyond *Jonesville* the train reaches *Brainerd*, and unites at that place with the line from *St. Paul*.

[*A description of Brainerd will be found under the heading "St. Paul Division," page 56.*]

**Gull River** (143 miles from *St. Paul*; population, 200).—*Gull river*, so called from the river which runs through the town, is a lumbering point from which great quantities of lumber are shipped for building purposes. One of the largest saw mills in the State is situated here; also a sash and door factory, and a planing mill. There are two hotels, a general store, a school-house, and the necessary shops. *Gull Lake* lies four miles north of the town. This is another of *Minnesota's* beautiful lakes, abounding with fish of all kinds. There is a steamboat on its waters which carries the tourist from eighty to one hundred miles around its shores. Two miles west of *Gull river* is

**Sylvan Lake**, also a very pleasant resort in summer. There are a great many deer, and some moose, in the neighborhood of these lakes. A moose was recently killed that weighed, when dressed, 800 pounds. Wolves and bears are also to be found. In the spring and autumn the rivers and lakes are alive with ducks and other water fowl. Years ago, one of the greatest battles between the *Chippeways* and *Sioux Indians* was fought here. "Hole-in-the-day," one of the *Chippeway* chiefs, was shot in this vicinity. "Bad Boy," so called by the *Indians* because he saved many of the white settlers' lives at the time of the *Indian massacre* in 1862, lives here.

**Pillager** and **Bath**, respectively 148 and 154 miles distant from *St. Paul*, are side tracks, and passenger trains do not stop at these stations.

**Motley** (158 miles west of *St. Paul*; population, 500).—

Motley has two hotels, a school-house, and a church. It is situated in a lumbering district, and its two saw mills cut 12,000,000 feet of lumber yearly. Very little farming has yet been done in the neighborhood; but a few persons have settled here with the intention of cultivating the ground, as they find the soil fully as good as prairie land, and in a short time there is likely to be a prosperous farming community around Motley. There are several lakes near the railroad, and among them *Lake Shamiveau*, about six miles south of the town, and *Alexander Lake*, twelve miles distant, in the same direction, both affording very good fishing. This is also one of the best of hunting grounds, over 1,000 deer having been lately killed, together with a number of black bears. The few Indians remaining in this neighborhood are industrious; a large number of them, having given up their wild mode of life, are at work in the saw mills. The Indians are said to work faithfully, and accomplish fully as much as white men. Stages run Wednesdays and Saturdays to *Long Prairie*, eighteen miles south.

**Staples Mills** (165 miles from St. Paul; population, 150).—This place contains two saw mills and a grain elevator. The inhabitants are engaged in lumbering, cutting wood, railroad ties, piles, etc. Game is plentiful in the neighborhood.

**Aldrich** (172 miles from St. Paul; population, 125).—The town, situated on the Partridge river, a beautiful little stream with well-defined banks and rapid current, thirty-six miles west of Brainerd, lies in Wadena county. The land surrounding the village is mostly covered with timber, consisting of birch, oak, maple, tamarack, spruce and pine. Large quantities of wood, railroad ties and piling, are shipped from Aldrich, to supply the demands of settlers further west, and millions of feet of pine logs are floated down the river in the spring of the year. A high ridge of land runs north of the village, and upon it is the principal road leading to the outlying farms. The soil, a



rich clay loam, produces large crops of wheat, oats, corn and potatoes, as well as garden vegetables. The farmers, an industrious, thrifty class of people, have the prairie openings well developed into good farms, and ship heavy crops of wheat, paying much attention also to stock-raising and dairying. Aldrich is supplied with good stores, a well-kept hotel, a saw mill capable of cutting 20,000 to 30,000 feet of lumber daily, an elevator, and a side track large enough for ninety cars. This is a good point for game of all kinds, while the Partridge river and the neighboring lakes are well stocked with fish.

**Verndale** (153 miles west of Duluth, 175 miles northwest of St. Paul, and 97 miles east of Fargo; population, 600).—This town is pleasantly situated in Wadena county, in the Wing river valley (one of the most fertile and beautiful valleys of the Northwest), of which it is the commercial centre. This valley is twenty miles in length, by five or six in breadth, and consists of a number of small prairies or openings, so admirably arranged by nature that almost every settler has timber and prairie. The village is about one mile east of the river in a beautiful opening, or small prairie, sheltered on the north and west by a dense grove of pines, while about two miles south and east can be seen the dark line of the Big Woods, which stretch away for many miles. Verndale is in Aldrich Township, and nearly centrally situated in the county. In its vicinity are many fine farms, the richness of the soil and the thrift of the inhabitants leaving nothing to be desired. Wing river, about one and a quarter miles distant, furnishes a fine water-power, which is used in supplying the mills. There are four hotels, two banks, a newspaper, two public halls, a church, good schools, several general stores, as well as a flouring mill and a saw mill. The best timber lands in Wadena county, besides the Big Woods to the south, are adjacent to the village, and lumber is easily shipped from this point. A

stage line to Hubbard, in Hubbard county, over a good road constructed by the State, crosses the southern frontier of Hubbard county. It contains much fine agricultural land, and a great deal of valuable pine land, and has attracted considerable settlement of recent years.

**Wadena** (183 miles west of St. Paul; population, 1,300).—This town is the county seat of Wadena county. The first line of buildings, which are mostly devoted to business purposes, are about two hundred feet from the track, leaving an open and unoccupied space extending along the entire front of the town site. This adds very much to the attractiveness of the town, at the same time answering the purpose of a public space for the enjoyment of base ball, lawn tennis, and other outdoor sports. The citizens are mostly of American birth, from the older States. The water is excellent, and easily obtained. The educational facilities are good, there being a graded school in a large, handsome brick building, costing \$10,000. Churches are well represented by five religious denominations. The country adjacent to the town is a slightly rolling prairie, dotted at intervals with picturesque groves and strips of timber. Oak, poplar, birch and ash are the most common growths. A few miles north of the town begins the timber line, beyond which lie some of the famous logging camps of Minnesota, where are found large tracts of white and yellow pine. Wadena is, therefore, a convenient shipping point in winter for cordwood, ties and piling. Wadena depends not alone for its support on the county wherein it is located; but, being favorably situated, draws a great amount of trade and business from Todd, Otter Tail, Becker and Cass counties, which are immediately adjoining. The fact that the town is so important a shipping point encourages business enterprises, among which may be mentioned two banks, a manufacturing company, devoted to the production of plows and general foundry work, numerous stores, three hotels, one

patent roller flouring mill, with a capacity of 100 barrels per day, and two grain elevators. The products are wheat, barley, corn, oats and potatoes. A semi-weekly line of stages runs to the agricultural village of *Wrightstown*, twelve miles distant, with 175 people, and to *Parker's Prairie*, twenty-five miles distant, with 350 inhabitants.

Wadena is the eastern terminus of the Northern Pacific, Fergus & Black Hills Railroad, which runs into central Dakota. This road also furnishes the citizens of Wadena with convenient and easy access to Battle and Clitherall Lakes, thirty miles southwest, which are popular picnic and fishing grounds, and also to Fergus Falls and the Red river valley.



## NORTHERN PACIFIC, FERGUS & BLACK HILLS BRANCH.

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FROM WADENA TO MILNOR.—DISTANCE, 120 MILES.

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This branch of the Northern Pacific system runs in a general southwesterly direction from Wadena to Fergus Falls, thence nearly due west, crossing both branches of the Red river, the Otter Tail and Bois de Sioux, at Wahpeton, and terminating for the present at Milnor, 120 miles from Wadena. The country traversed between Wadena and Fergus Falls belongs to the beautiful and picturesque lake and park region, which is a combination of prairie and wooded knolls, interspersed with numerous lakes. West of Fergus Falls the road descends into the level valley of the Red river, which it traverses for the remainder of its length. It will be extended at an early day to some point on the Missouri river.

**Deer Creek** (10 miles from Wadena ; population, 150).—This place is situated in the midst of a good wheat-growing and timber country. It has two stores, one blacksmith shop, an elevator and an hotel. *Parkton* is a new station, four miles west of Deer Creek.

**Henning** (18 miles from Wadena ; population, 300).—The town contains about fifty buildings, of which three are stores, carrying on a general business, and two hotels, both offering very good accommodations. There are also two blacksmith



shops, three carpenter shops, a meat market, a hardware store, etc. Here the Mississippi and the Red River of the North almost interlock. Forty rods east of the village site runs Leaf river, which empties into the Mississippi, and the same distance west the streams flow into the Red River of the North. Two miles south of the village are the Leaf Mountains, or Painted Hills, rising about 200 feet above the plains, making an elevation of about 1,700 feet above the level of the ocean. From these eminences a beautiful view is presented of the surrounding country. Henning occupies a central location to three of the finest lakes in the park-like region; viz., *Inman Lake*, on the east, with its crystal waters and heavily wooded shores; *East Battle Lake*, on the west, with its islands, bays, rocks and headlands, embowered amid the shades of the primeval forest; and *Leaf Lake*, on the north, with its deep, clear waters, and its shore line of twenty-five or thirty miles bordered by thick woods. There are several other charming lakes, such as *Round Lake*, with its white, gravelly beaches; *McDonald*, *Buchanan* and *Otter Tail Lakes*, the latter the largest of all, being ten miles long by three miles wide. These lakes all abound in many kinds of excellent fish, such as whitefish, pickerel, pike, catfish, and black and rock bass. This region has always been the resort and breeding ground of large numbers of water fowl, and no less than seventy varieties of birds have been found here.

**Vining** (24 miles from Wadena).—This station lies in the midst of a good grain-growing country, and the region is well timbered with oak and maple.

**Clitherall** (29 miles from Wadena; population, 150).—This new town, half way between Wadena and Fergus Falls, is situated near three of the finest and largest lakes in the renowned Minnesota park region,—*Clitherall Lake*, and the two noted *Battle Lakes*, west and east, respectively. There are two good hotels, three general stores, one drug store, one



hardware store, two grocery stores, one boot and shoe store, a large elevator, and a lumber yard. Clitherall Lake is a beautiful sheet of water, somewhat in the shape of the capital letter Y, extending from northeast to southwest, about four miles in length, with an average depth of sixty feet. It teems with every species of fish known to the Western lakes, from the monstrous buffalo of forty and fifty pounds avoirdupois, or the shy pickerel of twenty-five pounds, down to the beautiful perch of a couple of ounces. The lake is also haunted by water fowl in great numbers, from the pelican and goose to every species of duck. On its shores there is a small Mormon settlement, the oldest in Otter Tail county, the people having made their homes here as early as 1865. They are followers of Joseph Smith, and bitter denouncers of polygamy, and their cousins at Salt Lake. Their settlement is one mile and a half from the station, and is finely situated in a beautiful grove of oaks on the north shore of the lake. They have about five hundred acres under cultivation, and the railroad runs through their fields in sight of the settlement.

South of Clitherall, for ten miles, stretches a grand prairie, and he must indeed be a poor shot who can not here bag as many grouse as he wants. The Leaf Mountains are the favorite haunts of deer, which are killed by hunters, in great numbers, every autumn. The Indians say that these mountains have been visited every year by them, in pursuit of deer, as far back as their oldest people can remember. Not even the presence of the white man and the railroad can drive the Indian from his "hunting ground." Even now, at all seasons of the year, the tourist can see here and there a wigwam on the north shore of the lake, and the eyes of a shy papoose peeping at him from behind a bush.

**Battle Lake** (33 miles from Wadena; population, 500).—Ere beautiful Lake Clitherall is lost to view, as the train speeds along through pleasant groves and picturesque scenery,

it rounds a high bluff, and another picturesque sheet of water is seen, covering an area of four by nine miles. This is the well-known Battle Lake. The town of Battle Lake lies at the west end of the lake, and a large amount of wheat is marketed here. There are two elevators, one hotel, a school-house, a church, and a steam flouring mill. A lookout has been erected by the Northern Pacific Railroad, the view from which is magnificent. Seventeen beautiful lakes can be seen within a radius of five miles, all of which are well stocked with fish. Besides these there are many ponds where, during spring, summer and autumn, aquatic fowl are abundant. There are two Battle Lakes, *West Battle Lake* and *East Battle Lake*. *West Battle Lake*, the queen of Otter Tail county lakes, lies one mile north of the station, and is the largest of the three lakes named. It is a favorite resort for fishing parties, and the finny tribe seems inexhaustible. This lake has an average depth of seventy-five feet. A steamer, sail-boats and numbers of row-boats ply its waters. *East Battle Lake* is hidden among the islands and woodland hills, and is renowned for its romantic scenery. The lake is quite irregular in form, its shores being broken by grottoes, dells, lovely little coves and bays. It is about four miles long and from half a mile to two miles wide, containing three large islands. Wild ducks congregate here in the spring and autumn in countless numbers.

The Battle Lakes take their name from the famous and bloody conflict which was fought on the neck of land that divides their waters, between the Chippeway and Sioux Indians, in which the former won a dearly bought victory, killing every one of their enemies, but losing 500 of their own warriors. The battle ground is only a mile and a half from Clitherall, where the fortifications, breastworks, rifle-pits, and even the mounds over the graves, still remain as a record of the bloody and fatal strife between the savages for the possession of this most coveted hunting ground. On the north side of the lakes



is still another earth fortification, where at some time another terrible battle was fought between the Indians. A breastwork, in circular form, incloses about an acre of ground, and inside the circle are a number of rifle-pits. Arrow-heads, shells and other relics have been found in this place. *Maplewood* (39 miles from Wadena) is an unimportant station.

**Underwood** (41 miles from Wadena; population, 75) nestles amongst hills and beautiful lakes, which exhibit very fine scenery. The country adjacent can not be surpassed for richness and productiveness of soil. The climate is healthful, and the summer season sufficiently long to mature all crops. The settlers have the advantage of an abundance of hardwood timber, and find lucrative employment in shipping wood to Western markets. The town contains a chair factory, three stores and one elevator. The inhabitants consist principally of Scandinavians. The whole country is dotted here and there by beautiful lakes, varying in area from two to twenty square miles. These lakes abound in varieties of fish, such as pickerel, pike, bass, etc., and offer favorable resorts for the tourist. Large flocks of ducks and geese resort to them in spring and autumn, thus affording excellent shooting.

**Fergus Falls** (52 miles from Wadena; population, 7,000), the county seat of Otter Tail county, the largest well-settled county in Minnesota. The city is three miles square, and is built up more or less for nearly two miles up and down the Red river, and over a mile in breadth north and south. To the north, overlooking and protecting the valley, are groves of timber, through which stretch narrow strips of prairie. South of the river the land is for the most part prairie, on which are several planted groves of rapidly growing trees. The principal street, Lincoln avenue, is built up compactly on both sides for nearly half a mile, and business overflows thence up and down the cross streets. The business blocks are large and substantial, and the city is fast attaining a high commercial

standing. Within an area of two miles, north and south, by three miles east and west, are six distinct water-powers, with over eighty feet fall. The Red river at this point leaves a high upland region, and descends a distance of over 200 feet in a few miles to the level of the Red river plain, furnishing 10,000 horse-power, which is used for milling and manufacturing purposes. The favorable situation of Fergus Falls at the southern end of the celebrated Red river valley, surrounded by a rich, well-developed agricultural and stock-raising country, and in the midst of the famed park region of Minnesota, gives the place a front rank among the thriving towns of the Golden Northwest. Good water-power privileges are offered for sale or lease at reasonable figures, and manufacturing enterprises are being pushed with zeal. In close proximity to the town are numerous summer resorts, and the lakes, abounding in fish and game, yearly attract numbers of tourists and sportsmen.

Fergus Falls is on one of the main lines of the St. Paul, Minneapolis & Manitoba roads; a branch line of the same road runs northward to Pelican Rapids, a town of 600 inhabitants, twenty-two miles distant. In Fergus Falls are thirteen churches, a fine court house, two large public school houses, also substantial brick structures, ten hotels, one of which is one of the largest and best equipped hotels in northern Minnesota, two public halls, a Masonic temple, Odd-Fellows hall, three banks and about one hundred and fifty stores. The government land office is located here, and there are seven manufacturing establishments, including three flour mills and a paper mill. The city has the electric light, a telephone exchange and water and gas works. *Ames* and *Everdell* are small stations on the Fergus Falls Branch, which are gradually growing. The next important place is Breckenridge, 77 miles from Wadena; population, 800. This is the county seat of Wilkin county. It is situated on the western

border, a little south of the middle of the county, on the Red (formerly Otter Tail) river, and on the east side of the Bois de Sioux. Wilkin county contains about twenty townships, all of which are excellent agricultural lands. The soil is a deep drift of dark color resting on a subsoil of clay. Intermixed with the surface soil are immense deposits of minute lacustrine shells, containing large proportions of phosphates, and its upper portion is composed largely of the *débris* and ashes of vegetable matter. In 1857 a cabin was built on the town site from timber cut on the north side of the river. Shortly afterward the ground was surveyed, and a town plat, three miles long and two miles wide, was laid out. Machinery for a steam saw mill was hauled hither from St. Cloud in 1859, and a mill and several houses were erected. Breckenridge became a prosperous place; but it received a check to its progress from the Indian outbreak in 1862, at which time it was burned, and eight of the inhabitants slain. Mr. James C. Rice, who had charge of twenty-five wagons belonging to Mr. Burbank, of St. Paul, reached Breckenridge in 1862, on his way to Pembina, with supplies for the posts of the Hudson's Bay Company. He succeeded in getting into the stockade near Breckenridge, with his men and teams, before the Indians attacked the post. There was a company of eighty soldiers in the fort, all raw recruits, and the battle was maintained for two days. As the Indians could make no impression on the works, they finally withdrew, after losing several of their number, but without inflicting much damage upon the whites.

It was not until some eight or ten years had passed that the rebuilding of Breckenridge was begun, nor did it again become a place of any importance until 1873, when the St. Paul & Pacific Railway was finished to that point, since which time it has had a steady and substantial growth. Breckenridge has a round-house and repair shop, two general stores, a *court house*, a hardware store, a boot and shoe store, a drug



store, two elevators, a warehouse, four hotels, two churches, a bank, a feed store, a machinery dealer and a newspaper. It has a fine school building, costing \$10,000, built of brick with stone trimmings.

**Wahpeton** (78 miles from Wadena ; population, 2,000).—This town, situated on the Bois de Sioux, just above its confluence with the Red or Otter Tail, is the county seat of Richland county, one of the best agricultural counties in Dakota Territory. It is forty-six miles south of Fargo, and at the head of navigation on the Red River of the North. Wahpeton has a water-power, formed by the Otter Tail, with a fall of sixteen feet, furnishing a steady and reliable volume of water. In 1869 the first claim hut was put up on what is now the town site. In 1873 a trading house was established, and traffic was carried on with the Indians, who occupied nearly the entire country from Big Stone Lake to the British Dominion for miles on both sides of the river. In 1876 the place was laid out in lots, and soon afterward was recognized as an eligible town site. Wahpeton has now a fine opera house ; a court house, erected at a cost of \$30,000 ; two good newspapers, several churches, two banks, school buildings, and five hotels, while all branches of business are well represented. There are an elevator of 100,000 bushels capacity, two large grain warehouses, a steam flouring mill, a steam factory and repair shop, two railroad depots and four lumber yards. The town is in the midst of an agricultural country of superior fertility, and ranks, as a commercial centre, among the first in Eastern Dakota. Its growth has been rapid and substantial, and its further development is assured by the establishment of new industries. There are various kinds of timber in Richland county, consisting of oak, ash, elm, box elder, linden and cottonwood. West of Wahpeton, *Ellsworth*, *Wyndmere* and *Moreton* are small villages.

**Milnor**, the present terminus of the road, was founded in

1883, and rapidly became an important business point. The surrounding country consists of rolling prairie, and is all fertile to a high degree, there being scarcely any waste land. Milnor is the county seat of Sargent county, Dakota, and has 600 inhabitants, two hotels, one bank and a public hall, one newspaper, several churches and about twenty stores. There is an inexhaustible supply of limestone in the immediate vicinity. The wheat shipments are large, and constantly increasing. Fort Sisseton Indian Agency is thirty miles south. There is communication by stage from Milnor to Sargent, Lisbon and other places west, north and south.



## THE DULUTH & MANITOBA RAILROAD.

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FROM WINNIPEG JUNCTION TO PEMBINA, 200 MILES.

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This road extends from Winnipeg Junction, a station on the Minnesota Division of the Northern Pacific, 251 miles from St. Paul, to Pembina, Dakota. It is 200 miles long, and runs for the first 105 miles through one of the most productive wheat regions in Northern Minnesota; then crossing the Red River of the North at Grand Forks, it runs for 95 miles almost due north, through the lower Red River valley, a region scarcely surpassed anywhere on the globe for natural fertility, and now producing a larger average yield of wheat per acre than any section of the United States with the exception of the Pacific coast.

The first stations north of Winnipeg Junction are *Hitterdale, Ulen, Twin Valley, Heiburg, Gary, Fertile, and Tilden.*

**Fertile** (296 miles from St. Paul) has a population of about 300 and is an important local trading point. The road now reaches

**Red Lake Falls** (320 miles from St. Paul), a growing manufacturing and milling town at the junction of the Clearwater and Red Lake rivers, with a population of 1,200. There are no less than thirteen valuable water powers on these two rivers, in and near the town, and just below the junction of the rivers is a very large power, now being improved by a



stock company. Red Lake Falls has two flouring mills, two saw mills, two weekly papers, three hotels, and a number of mercantile houses. The road now turns to the west and crosses the level valley of the Red River of the North. The stations are *Huot, South Euclid, Buffington, Keystone, Rockwood, Crowell, and Sullivan.*

**East Grand Forks** (356 miles from St. Paul) has a population of 500, and is situated on the Minnesota side of the Red River of the North. The railroad shops are located here, and there are two grain elevators and a number of stores. The town is connected by both railroad and highway bridges with

**Grand Forks, Dakota** (population, 7,000), a busy and prosperous city in the midst of a magnificent wheat country, situated at the junction of the Red Lake river with the Red River of the North. Besides the Duluth & Manitoba Railroad, Grand Forks is on two branches of the St. Paul, Minneapolis & Manitoba road. The river is navigable for steamboats up to Fargo and down to Winnipeg. Considerable grain and other freight is brought by boats to Grand Forks. The city has two daily newspapers, water works, gas and electric light, a large saw mill using logs floated down Red Lake river from the Minnesota pineries, seven churches, the Territorial University of North Dakota, and numerous important manufacturing and mercantile concerns. North of Grand Forks the stations on the railroad are *Kelly's, Meckinock, Beans, Gilby, Johnstown, Forest River, Voss,* and

**Grafton** (406 miles from St. Paul; population, 3,000), county seat of Walsh county, one of the great wheat producing counties of Dakota. The land in this county, as in all the lower Red Lake valley on the Dakota side, is rolling prairie, with occasional strips of timber following the course of the streams which run into the Red River of the North. The yield of

hard winter wheat has seldom fallen below twenty bushels, and often averages as high as thirty bushels. The crop of Walsh county in 1887 was estimated at 5,000,000 bushels. Grafton has water works supplied from an artesian well 912 feet deep, which discharges 1,500 gallons per minute. It has seven churches, two national banks, two weekly newspapers, a fine public school building, and a handsome court house. North of Grafton the stations are *Salt Lake*, *Drayton* (population 350), *Bowesmont*, *Joliet*, and

**Pembina** (450 miles from St. Paul; population, 1,000), county seat of Pembina county, is the oldest town in the West, having been settled by the Earl of Selkirk's colonists as long ago as 1801. Pembina has a beautiful situation at the junction of the Pembina river with the Red River of the North. It was for many years one of the posts of the Hudson Bay Company. From a fur-trading post, frequented by Indians and half-breeds, its character has been changed in recent years to that of a prosperous market-town for a rich farming country. Pembina has a handsome court house, a large public school house, a flouring mill, a weekly newspaper, and numerous stores and shops. About a mile above the town stands Fort Pembina, a military post occupied by two companies of infantry. The national boundary line between the United States and the Dominion of Canada is two miles from the town. Just across the Red River of the North, in Minnesota, is the town of St. Vincent, and immediately north of the international boundary line is the important town of Emerson, with a population of 2,000. The Duluth & Manitoba Railroad ends at the boundary, where it connects with a road to Winnipeg, built by the province of Manitoba. A branch of the Canadian Pacific line connects at St. Vincent with one of the main lines of the St. Paul, Minneapolis & Manitoba Railroad. Pembina and St. Vincent are connected by a ferry across the

Red river. Pembina county is largely settled by Canadians, French-Canadians, and Icelanders, with a considerable native American element. A trip to Pembina can be highly recommended to the tourist who wishes to see something of the rich wheat country of the lower Red River valley, and at the same time to visit a town which has an interesting frontier history, reaching back to the beginning of the present century.



## CASCADE DIVISION.

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FROM PASCO TO TACOMA.—DISTANCE, 259 MILES.

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The Cascade Division of the Northern Pacific is the most recently constructed of all the divisions of the main line. It was mainly built in the years 1885, 1886, and 1887, and the great tunnel under the Cascade Mountains was completed in June, 1888. The road crosses the Columbia river between Pasco and Kennewick on a combination iron and wood bridge, which spans the broad, blue flood of this mighty stream just about the mouth of its principal affluent, the Snake river, and follows the valley of the Yakima river, which empties into the Columbia a few miles above Kennewick, all the way up the sources of the former stream in the Cascade Mountains. Along the lower Yakima the country is dry and covered with sage brush, but the soil is fertile and irrigating-ditch enterprises will soon convert the entire region into a thickly settled farming country. For about 30 miles the road runs through the Simco Indian reservation, which is well settled and contains many irrigated farms and large stretches of verdant pasture land. Passing Union Gap through a low mountain range the road enters a well-cultivated basin where the Natchess and other tributaries of the Yakima furnish abundant water for irrigation. Continuing northwestward, the road winds for many miles through the profound and picturesque defiles of the Yakima Cañon, and then emerges into the Kittitas valley which is watered by the Yakima and numerous tributary streams, and

is well settled by farmers engaged in raising grain and stock. Considerable placer mining is done on the headwaters of the Teanaway and the Swauk, two large creeks which rise in the Peshastin Mountains. These mountains run across the head of the Kittitas valley, and present a magnificent spectacle of lofty rocky peaks crowned with snow, which can be enjoyed from many points on the railroad. The highest of these peaks is Mt. Stuart, which has an altitude of over 12,000 feet. The Peshastin range is a granite formation, entirely different in its geological character from the Cascade Mountains, which are basaltic, and of which it seems to form a spur. Near the base of the Peshastin Mountains lies an extensive coal field. The ascent of the Cascade Mountains is made by the Northern Pacific road up remarkably light grades, the heaviest of which does not exceed two feet to the hundred, or 116 feet to the mile.

**The Great Tunnel.**—The mountains are crossed at Stampede Pass, through the sharp comb of which a tunnel almost two miles long has been excavated. This tunnel is, with one exception, the longest in America, being surpassed only by the Hoosac Tunnel in Massachusetts, which is three miles in length. The Hoosac Tunnel was excavated from both ends and from a central shaft, but the mountain over the Cascade Tunnel was too high to admit of a shaft, and the whole of the excavation was done at the ends. In view of this fact, and also of the wildness of the country, and the distance from sources of supplies, the Cascade Tunnel may fairly be regarded as a greater work of engineering than the famous tunnel under the Hoosac Mountains. During the progress of the work on the tunnel, a switch-back line was built over the summit of the Stampede Pass, with maximum grades of 290 feet to the mile, and was successfully operated for over a year, trains being hauled over the mountains by decapods, or eight-wheeled engines, the heaviest ever built in America.

**Along Green River.**—After emerging from the tunnel, the railroad descends by grades no steeper than those on the east side of the mountains into the valley of the Green river, in the midst of superb mountain scenery. Green river is a beautiful mountain stream, well stocked with trout, and flowing through dense forests of fir, cedar, and spruce.

**In the Puyallup Valley.**—After leaving the Green river, the road crosses two divides, first to the White river and then to the Puyallup, a picturesque stream fed from the glaciers on the slopes of Mt. Tacoma. The important coal mines of Carbonado, South Prairie, and Wilkeson are situated at the headwaters of this river. Its lower course is through the most productive hop region in the world, where the possession of a few acres in hops makes the farmer independent for life.

The principal towns along the Cascade Division are as follows:

**Prosser** (1,723 miles from St. Paul) is a small town, with a mill, two or three stores, and a hotel, which is evidently destined to become an important place as soon as irrigation projects now on foot redeem the large area of fertile desert land in the vicinity.

**North Yakima** (1,772 miles from St. Paul) is the county seat of Yakima county, and has a population of about 1,500, with three weekly newspapers, a flouring mill, court house, opera house, and large hotel, and numerous business establishments. The lands along the Yakima and its tributaries, the Attanum, the Natchess, and the Cowychee, are well settled, and with irrigation are highly productive. The higher lands are covered with bunch grass, and are used for pasturage. All the fruits of the temperate zone thrive in this valley.

**Ellensburg** (1,809 miles from St. Paul), county seat of Kittitas county, population 1,200, has three weekly newspapers, a large hotel, an academy, and is an active trading point for the farming and mining country of the upper Yakima valley.

Stages run to the Columbia river above Rock Island rapids, from whence there is a steamboat which runs on the Columbia and Okanagan rivers to the Okanagan mining district.

**Cleallum** (1,834 miles from St. Paul) is the junction of the short branch road which runs to the Roslyn coal mines. Extensive beds of iron ore have been found in the vicinity of Cleallum, and preparations are now (1888) being made for the establishment of an important iron and steel manufacturing plant at this place under the management of an English company. The population of Cleallum is about 300.

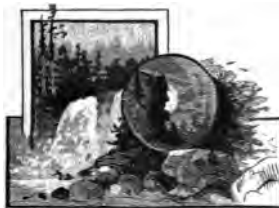
**Roslyn** (1,833 miles from St. Paul and 4 from Cleallum) is the terminus of the Roslyn branch, and has a population of about 500. It is the most important coal mining point on the entire line of the Northern Pacific. The coal is a superior hard, black lignite, and is used for locomotive fuel and also for domestic fuel in all the towns of Eastern Washington. About 300 tons a day are mined.

**Easton**, on the eastern side of the Cascade Mountains, and **Weston**, on the western side, are railroad towns, inhabited principally by employees of the road, who run the heavy engines used on the mountain grades.

**Puyallup** (1,932 miles from St. Paul) is essentially a hop town, being the trading point for all the hop-raising country in the valley of the Puyallup, Stuck, and White rivers. It has a population of about 500, a weekly newspaper, two hotels, a graded school, bank, and numerous stores. The hop fields extend up to the very door-yards in the village, and the drying houses on the near hop farms are among the most conspicuous objects in the landscape. The tourist who has time to spare is advised to stop a day in Puyallup and investigate the very interesting industry which has created the town. The soil in this hop-growing valley seems to be inexhaustible. Wild land valuable for hop culture near Puyallup is worth from \$75 to

\$100 per acre, and costs about \$100 more per acre to clear. It is said that, taking an average of a period of years, every acre cultivated in hops will yield a net profit of at least \$100. The price of hops varies widely from year to year, and is mainly dependent on the German crop. Some years it is claimed there is no profit at all in hops raised in Washington, but in the long run the hop farmers all become comfortably well off. There are few forms of agricultural industry where so much money can be made from an acre of ground.

After leaving Puyallup the railroad traverses for about eight miles the Puyallup Indian reservation. These Indians own their land in severalty, and are, as a rule, industrious farmers. Their children are educated in the agency school, and the good order of the reservation is enforced by a justice of the peace and constables elected by the Indians themselves.





## MINNESOTA DIVISION.

[Continued from page 79.]

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**Bluffton** (187 miles west of St. Paul ; population, 600).—This town, very near the divide between the Mississippi and Red river valleys, is situated on Bluff creek, a branch of Leaf river, into which it empties about half a mile below the town. In the month of August, 1878, Bluffton was organized and given its name, a school district having been formed out of it and a part of Compton. The first school was held in a store, the goods on one side, and the school on the other. The town at that time contained thirteen voters. It now has an hotel, a church, a public hall, a school, blacksmith and wagon shop, a saw mill, a planing mill, a grist mill, a flouring mill, an elevator and a postoffice. Its principal industries are the raising of wheat and the shipping of wood, ties, lumber, wheat and flour. Small game and fish are plentiful, and deer are abundant in this region. *Amboy*, 190 miles from St. Paul, is simply a side track.

**New York Mills** (195 miles west of St. Paul ; population, 500).—The inhabitants of this town and the surrounding country are chiefly Finns and Norwegians. A paper is published in the town in the Finnish language, which has a considerable circulation in Finland among the friends of the settlers. The principal industry of the place is the sawing of lumber. There is an hotel, a number of general stores, a school and a church. The surrounding country is well timbered, and the soil is a rich, black loam, which can profitably be cleared, and

a ready market found for the timber in the form of railroad ties, fire-wood and saw-logs.

**Perham** (206 miles west of St. Paul; population, 1,200).—This town, situated in the northeastern part of Otter Tail county, on an open prairie of five by ten miles square, is one of the most prosperous places on the line of the Northern Pacific Railroad. The population of the town and tributary country is about half German, one-quarter American, and the other quarter composed of Poles and Scandinavians. The Poles have a church in the place. Every branch of business is well represented, and manufacturing enterprises are flourishing. Among the latter are a carriage and wagon factory, and a barrel and stave factory. The town supports two good hotels. There are five churches, several good schools and a newspaper. Perham's greatest pride is her five-story steam Prairie Roller Mills, fifty-four by fifty-six feet in dimensions, and worth \$60,000, with a capacity of 250 barrels of flour per day. In connection with the mill there is a large warehouse, thirty-six by forty-four feet in size, with a capacity of 35,000 bushels. The scenery about Perham is attractive. In coming from the east, for some distance nothing can be seen but pine forests, which suddenly open into a beautiful rolling prairie, through which the famous Red River of the North passes. To the right, only a short distance away, lie two beautiful lakes, called *Big* and *Little Pine Lakes*. The latter is about two miles wide and four miles long, while the former is nearly three times as large. The view from the passing train is very pleasing.

After leaving Perham there are lakes without number, which, to travelers from Eastern cities, would be considered marvels of beauty. All of these lie in sight of this thriving town. They are now becoming popular, and many tourists spend the summer on their banks. Among these resorts is *Otter Tail Lake*, four miles wide and eleven miles long. It is situated

eight miles south of the town. *Marion Lake*, three miles distant, in the same direction, is perhaps three-quarters of a mile in diameter, and nearly circular in form. No better hunting ground can be found in the Northwest than that surrounding Perham. The lakes are full of fish of every description, including pickerel, pike, mascalonge, black and rock bass, catfish, sunfish and whitefish. In spring and autumn ducks and geese are killed in great numbers. During the season the prairie and groves are alive with quail, grouse, swan, brant, woodcock, prairie chicken, partridge, snipe, curlew and rabbits. In early winter the deer, elk and moose are an easy prey to the sportsman.

There is a small Indian village about two miles from the town. These Indians are Chippeways who belong to the White Earth reservation, but prefer to remain in their old home. They are self-supporting, the men working in the pineries and the harvest fields, and the women gathering berries for sale. *Luce* is a small station between Perham and Frazee.

**Frazee** (217 miles west of St. Paul; population, 300).—Frazee City, situated in Becker county, was established about eight years ago. It boasts of having the largest flouring mill west of Minneapolis, the product of which is shipped to all parts of the world. In addition to the flour mill there is a large saw mill, which is supplied with timber driven down the Otter Tail river from ten to twenty miles. There are two hotels, one public hall, a good school and a grist mill. Frazee City is surrounded by a first-class farming country. Otter Tail river, running through the town, is full of all kinds of fish, and so are the numerous lakes that find an outlet through this river. Opportunities for hunting bear, deer, wolf, fox, lynx and otter, are exceptionally good; and also for shooting geese, ducks, grouse and pheasants. Johnson, five miles *beyond*, is only a side track.



**Detroit** (227 miles west of St. Paul ; population, 1,400).—Detroit, the county seat of Becker county, is situated in a beautiful timber opening, the surface of which is gently undulating, the soil being of a sandy nature. The village organization comprises the entire township, six miles square of territory. The organization was perfected in the winter of 1880, by act of the legislature. Half a mile east of the village runs the Pelican river, which stream is the western boundary line of what is known as the "Big Woods" of Minnesota. To the west there is but little timber, and on the north the country is about equally divided between timber and prairie land.

South of Detroit lies what is known as the Pelican Lake country, one of the finest, as well as the most fertile and beautiful, sections of Minnesota. The surrounding region is very productive, and each year the farmers are blessed with abundant crops, for which a good and ready market is always found. The advantages of Detroit are many. Its abundance of excellent oak, maple, elm, birch, basswood, tamarack and ash timber, suitable for the manufacture of all articles made from wood, invites industrial enterprise. The business houses and public institutions comprise four hotels, two newspapers, three drug, one jewelry, one boot and shoe, two millinery and four general stores, three wagon and blacksmith shops, a furniture factory, a hardware and farm machinery establishment, a grist mill, livery stables and two banks. The village has churches of the various denominations, most of which have fine edifices, and also one of the best graded public schools in the State, with high school department, conducted by an able corps of teachers. The new county court house, erected at a cost of \$25,000, is one of the handsomest buildings of its class in northern Minnesota. It is constructed of Milwaukee brick, with slate roof.

Prominent among the features of this section are its advan-

tages as a summer resort. *Detroit Lake*, one of the most beautiful sheets of water in Minnesota, lies only half a mile from the business portion of the village. Each year it becomes more popular with the people of the neighboring towns, and also with those who are accustomed to flee from the hot and dusty cities, and from the treeless prairies, during the summer months. The lake, which is about a mile and a half wide, and seven miles long, in form somewhat resembles a horseshoe, with a sand-bar reaching from shore to shore, about midway between the two ends of the lake, which is converted into a most delightful driveway. Here is a high bank towering above the clear waters of the lake, and there the broad and pebbly beach, with an occasional "opening," where a sturdy frontiersman is carving out a farm. To the east, Detroit Mountain, whose heights are covered by a dense growth of timber, towers far above the surrounding country, lending its rugged charms to the scene. The lake is stocked with all kinds of "gamey" fish, which are an attraction to the sportsman, the variety including pickerel, black and Oswego bass, wall-eyed pike, perch, and also California salmon, which were planted in the lake some time ago by the State Fish Commissioner.

In 1882 the Detroit Lake and St. Louis Boat Club organization was perfected, and its members purchased and improved a handsome piece of property fronting on the east bank of the lake. They have now a fine and commodious club house, and a number of cottages. The club is limited to 100 members.

Detroit Lake, however, is only one of many which abound in the immediate vicinity, the following being also within the township, and varying from one to four miles in length; viz., *Floyd Lake, Lake Flora, Lake Rice, Oak Lake, Edgerton Lake, Long Lake* and *Lake St. Clair*. Here, too, are mineral springs, iron and sulphur, the health-giving

qualities of which have been known to the Indians for many generations.

The Detroit Lake Pleasure Grounds are the most popular place of amusement in northern Minnesota, and are to be made more than ever attractive. A handsome steam yacht, as well as sail and row boats, are furnished on these grounds to visitors at a small cost.

The Hotel Minnesota, built in 1884, answers the double purpose of a first-class hotel for the town, and of a summer resort, being kept open the year round. It is four stories in height, with wide piazzas and well-furnished rooms. In its architectural and general management, it is entitled to rank with the best class of summer resort hotels in the State. The advantages of Detroit for summer tourists and residents are numerous. The place is situated on a high plateau, near the headwaters of both the Mississippi and the Red River of the North. This plateau has a constant sweep of the cool breeze blowing over the great Northwest forests. Excellent drives through woodland and farming country, with numerous lakes, are here; and, for both fishing and hunting, the place has few rivals. Although the country immediately surrounding the town is well settled, a short ride brings the sportsman to the primeval forests where elk, moose and bear are killed in large numbers every year. The lake abounds in water fowl and fish.

Looking upon Detroit to-day, with its evidences of advanced civilization, it seems almost incredible that only twelve years ago the pioneer settlers were met here by a band of Chippewas, who, recognizing and graciously succumbing to the inevitable march of events, invited them to a feast of fat things; viz., baked dog and boiled fish, cooked whole, with entrails included. Of these Indian dainties the pioneers partook, but with what degree of relish has never been recorded. Tri-weekly stages run from Detroit to *Richwood*, *White Earth*,



*Cormorant, Spring Creek, Pelican Rapids and Carsonville*, which are also favorable points to visit in search of feathered game, and also for bear and deer. The latter are met along the woody margins of streams and lakes, while Bruin confines himself mainly to the coppices and forests.

**The White Earth Reservation.**—Twenty-five miles north of this village is the White Earth Reservation of the Chippeway Indians. These Indians, who call themselves Ojibways, have always been the friend of the white man. They were a kindly disposed race, and contact with white men had dragged them down into a depth of degradation never known to their fathers. The deadly fire water flowed throughout their country, and disease, poverty and death held a carnival in every Indian village. Their friends secured for them this beautiful reservation, as fair a country as the sun ever shone upon. This action might have been prevented by the pioneers of the Northern Pacific Railroad; but in this case, as in every other where the rights of the red man were concerned, the railroad company was his friend. A few years after Bishop Whipple had commenced his mission here, the Treasurer of the company, the Bishop, Lord Charles Hervey and others paid the Indians a visit. The Bishop consecrated their hospital, and held confirmation. After the services, the Indians made a feast for the Bishop and his friends. When all had eaten, the chief, Wah-bon-a-quot arose, and, addressing the Bishop, said: "We are glad to see our friends. Do they know the history of the Ojibways? If not, I will tell them." In a few graphic words he described the Indians as they were before the white man came. The woods and prairies were full of game, the lakes and forests with fish, and the wild rice brought its harvest. "Hunger never came to our wigwam," said he. "Would your friends like to see us as we were before the white man came?" Suddenly there appeared a tall, athletic *Indian, with painted face, and dressed in a robe of skins orn-*

mented with porcupine quills; and by his side a pleasant-faced woman in wild dress. "There," said the chief, with eyes gleaming with pride, "there see Ojibways as they were before the white man came." Turning to his guests, continued he, "Shall I tell you what the white man did for us?" Then dropping his voice, he added, "The white man told us we were poor; we had no books, no fine horses, no fine canoes, no tools. 'Give us your land, and you shall become like the white man.' I can not tell the story: you must see it." Then stepped out a poor, ragged wretch, with tattered blanket, and face covered with mud; by his side a more dreadful specimen of womanhood. The chief raised his hands: "Are you an Ojibway?" The Indian nodded. Sadly the chief said: "Oh, Manitou, how came this?" The Indian raised a black bottle, and spoke one word, "Ishkotah wabo" (fire water). "This is the gift of the white man." It went like an electric thrill through every heart, and brought tears to many eyes. The chief said: "A pale-faced man came to see us. I am sorry to say he has seen me and my fellows drunk. He told a wonderful story of the Son of the Great Spirit coming to save men. He told us his fathers were wild men; that this religion had made them great, and what it had done for them it would do for others. We did not hear; our ears were deaf; our hearts were heavy. He came again and again, always telling one story of Jesus, the poor man's friend. We knew each summer, that, when the sun was high in the heavens, the Bishop would come. He gave us a red minister. At last we heard. Shall I tell you what this religion has done for my people? You must see." There stepped out a young Indian in a black frock coat; by his side a woman neatly clad in a black alpaca dress. "There," said the chief, "there is only one religion which can take a man in the mire by the hand and bid him look up and call God his Father."

There are 1,500 civilized Indians at White Earth. They



have two churches,—Episcopal church and Roman Catholic. Visitors are always received with kindness, and no excursion on the line of the Northern Pacific Railroad will be more pleasant than a visit to White Earth.

**Audubon** (234 miles from St. Paul; population, 250).—This settlement, in Becker county, is principally of Scandinavians. It was founded about 1872, and named after the celebrated naturalist. It has had a slow but steady growth, being a good point for the production of wheat, oats, barley, rye, potatoes, butter, cheese and eggs. Audubon has four general stores, two churches, two wheat elevators, a grist mill, a saw mill and the usual shops. There are several lakes in the vicinity which afford good fishing, and small game also abounds.

**Lake Park** (240 miles from St. Paul; population, 500).—This is an active business town in the western part of Becker county, situated in the midst of a rolling prairie country, interspersed with lakes and groves of hard-wood timber. It has three grain elevators, and a fourth, and larger one, is in the course of construction. There are also two banks, several dry-goods stores, hardware and drug stores, two churches, a public hall, a flouring mill and an elevator. The population is chiefly Scandinavian. The large farms of Thomas H. Canfield are in the neighborhood. Mr. Canfield has five sections, most of which is under cultivation, affording employment to a large force of men and teams. The principal production is wheat; but the raising of blooded stock is also extensively engaged in. Lake Park is situated on Flora Lake. The town has a summer hotel, accommodating a hundred people. Twenty-two miles northwest of Lake Park is the White Earth Indian Reservation, a pleasant place to view the manners and customs of the red men, who are on friendly terms with the whites. They have farms under a good state of cultivation. *Hillsdale* (five miles beyond) is a side track.

**Hawley** (251 miles from St. Paul; population, 200).—The

town lies in the depression east of the hills which skirt the Red river. Its population is largely Scandinavian. It is supplied with a school and two churches, one of which is Methodist, and the other belongs to the United Brethren. From the town, the distance is but a few minutes' walk to the Buffalo river, where there are two large flouring mills. All branches of trade are represented. The town has one hotel, a public hall and an elevator. *Silver Lake*, three miles south, a beautiful body of water covering 300 acres, is an excellent fishing resort. Good hunting and fishing are also to be had in the surrounding country, geese, ducks and grouse being quite plentiful, while deer and bear are found in the timber regions southward.

**Muskoda** (256 miles west of St. Paul; population, 125).—Muskoda is an Indian word, said to signify "the buffalo river." The Buffalo river runs adjacent to the town, and is a beautiful, swiftly flowing stream, fifty feet wide, with high timbered bluffs on either side. It is well adapted to milling purposes, and abounds in black bass, pike and pickerel. *Lake Maria*, two and a half miles southeast of Muskoda, and a half-mile south of the Northern Pacific track, is a curiosity in itself, inasmuch as it is not known to contain a living thing, although every other lake in the region is full of fish. This lake covers 300 acres, and is twelve to fifteen feet deep. A beautiful forest surrounds it, and its shores are a gravelly beach. *Horseshoe Lake*, two and a half miles north of the Northern Pacific Railroad, covers 200 acres, and is well stocked with fish.

The soil of the surrounding country is rich, and well adapted to the production of cereals and grasses, the region being noted for wheat and stock raising. There are a number of springs here, from which pure water flows the year round. This neighborhood has an abundance of small game; geese, ducks, prairie chickens, snipe and rabbits being among the

varieties. In former years the country was a favorite hunting ground of the Indians, and the region is strewn still with buffalo skulls and elk horns.

**Glyndon** (264 miles west of St. Paul; population, 450).—Glyndon lies in Clay county, four miles west of the Northern Pacific crossing of the North Buffalo river, and nine miles east of the Red River of the North. The town was founded in 1872, by the location here of the crossings of the Northern Pacific Railroad and the St. Paul, Minneapolis & Manitoba Railroad. Here were the field headquarters of the Red river colony of the date named. Though set on a level prairie, Glyndon possesses some picturesqueness from its situation between the two branches of the Buffalo river, which flow to the west and north, and it shows the activities peculiar to the crossing town of two great railways. The fact that it is in ready communication with the East and South by rail and lake routes, makes it a superior wheat market and shipping point. The present vast business of grain buying and warehousing in the Red river valley, was begun at Glyndon, and here was built the first grain elevator in the valley. The Barnes and Tenny farm, 4,000 acres in extent, is still one of the features of the locality, affording a specimen of the rich and productive agricultural lands which surround the town. Drainage is good by streams and coulees. In the village are six stores, lumber yard, three machinery depots, three hotels, two blacksmith shops, one Union and one Methodist church, graded schools, a large public hall, a weekly newspaper, a grain elevator, and extensive railway building and yard facilities, including several miles of side tracks. Wheat-raising is still the leading farm industry; but the stock and dairy interest is growing rapidly, the excellent natural grasses of the region building up a flattering amount of traffic in milk, which is shipped by rail West and North. The population of Glyndon is largely composed of Americans. *Tenny*, three miles further west, is a

side track, with an elevator for the storage and shipment of wheat.

**The Red River of the North.**—This stream is named to distinguish it from the Red river of Louisiana. It has two branches which meet at Wahpeton, the Bois de Sioux rising in Lake Traverse, and the Otter Tail rising in numerous lakes in northern Minnesota (lat.  $46^{\circ}$ ); flows due north a distance of more than 200 miles, entering Lake Winnipeg in the northern part of the Province of Manitoba. The Red river marks the boundary between Minnesota and Dakota. Its elevation above the sea-level at Moorhead and Fargo is 807 feet. From these points northward to Winnipeg the stream is navigable, even at a low stage of water, the shallow portions being dredged as occasion requires. Large quantities of wheat and merchandise are transported by steamers which ply between Moorhead, Fargo and Winnipeg. In 1882 the fleet numbered sixteen steamers, of a capacity of from 100 to 250 tons each, and twenty-one barges of thirty tons each; but the building of railways has demolished this traffic.

This river is always subject to overflow in the spring. Its course being almost due north, the winter ice breaks up first along its southern length, and the frozen stream can not carry off the freed waters, which back up upon the ice, and deluge the fields to a greater or less extent. There can be no question but that the soil is benefited by the alluvial deposits which are thus spread over it; but it is often very inconvenient and discouraging to the settlers in Manitoba to be cut off from rail communication with the outer world by the overflow. The valley of the Red River of the North is from sixty to eighty miles wide, embracing an area of 67,000 square miles, at least eighty per cent. of which is composed of the very best farming land. The valley proper is a beautiful prairie, apparently as level as a garden bed, though in reality sloping gently and imperceptibly from both sides to the river, and slightly inclining to the north. The soil



consists of a rich black loam, from three to seven feet in depth, which yields from twenty to twenty-five bushels of wheat per acre. The whole valley is well watered by nature, there being a large number of small rivers tributary to the Red, on either side, which perform the double office of supplying water and draining the land. The most important of these streams on the Minnesota side are, the Buffalo, Wild Rice, Marsh, Sand Hill, Red Lake, Middle, Tamarac, Two Rivers and Red Grass. From the west there are several rivers of considerable size, the principal being the Sheyenne, Goose, Turtle, Forest, Park, Tongue and Pembina. All of these have branches, which penetrate the level prairie in every direction, affording an abundance of excellent pure water. The rivers are, for the most part, skirted with a good growth of oak, elm, soft maple, basswood, ash and box elder, which is ample for fuel purposes. Extensive pine lands are about the headwaters of most of the rivers on the Minnesota side.

On examining a map of the Red river basin, the fact is apparent that most of the tributary streams have their sources in a higher latitude than their mouths. This peculiarity extends as far north as the Saskatchewan, in Manitoba, and suggests that, originally, the slope of the country was to the south, and that the waters of this immense area were drained by a large stream which occupied the now comparatively dry valley of the Minnesota. The theory has been advanced by scientific men, that there has been a subsidence along the valley of the Red river, having its maximum below Lake Winnipeg, together with a possible upheaval at the headwaters of the Minnesota river.

**Moorhead** (276 miles northwest of St. Paul; population, 4,000).—This well-built city, in lat.  $46^{\circ} 51' N.$ , long.  $96^{\circ} 50' W.$ , and 840 feet above the level of the sea, is the last place on *the line of the Northern Pacific Railroad in the State of*

Minnesota, distant 251 miles from Duluth, on Lake Superior, and was named in honor of W. G. Moorhead, of Pennsylvania, formerly a Director of the Northern Pacific road. It is the county seat of Clay county, advantageously situated on the east side of the Red River of the North, immediately opposite the bustling city of Fargo, Dak., with which it is in communication by means of a bridge which spans the stream. Being situated in the midst of the great wheat region of the Northwest, its growth has been steady and substantial. Moorhead has fine business blocks, flouring mills, grain elevators, a brewery, a driving park, fair grounds, a daily and weekly newspaper. Its chief hotel,—the Grand Pacific,—perhaps the largest and best equipped hotel in the Northwest, was built at a cost of \$160,000. Its architecture is in pure Queen Anne style, the interior fittings and decorations being in keeping. In addition to this, there is another first-class brick hotel, three stories in height, with accommodation for eighty guests. Moorhead schools afford superior advantages. Besides the public schools, there is an academy under the control of the Episcopal church, which is known as the “Bishop Whipple School,” in honor of the Bishop of the diocese of Minnesota, and this establishment offers a classical as well as business education. The churches, represented by all the leading denominations, have commodious edifices. A number of miscellaneous manufacturing enterprises already exist, among which may be named an iron foundry and a planing mill. The city is well supplied with an abundance of brick, there being four yards in which this building material is manufactured, giving employment alone to 150 men.

Moorhead is the crossing point of two trunk railroads, the Northern Pacific and the St. Paul, Minneapolis & Manitoba. Besides these two great railways, there are also the Moorhead & Northern, from Moorhead to Fisher’s Landing, Minn. The principal product of the country is wheat, and large ship-

ments of the same are made, not only by rail, but also by river. One of the steamboat lines,—the Alsop,—owned at Moorhead, does a heavy freight business, towing barges laden with supplies and produce to all points on the Red river between Moorhead and Pembina.





## NORTHERN DAKOTA.

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The railroad crosses Dakota from east to west in nearly a direct line, its length within the Territory being 294 miles. The entire area of Dakota is 153,000 square miles, and it is only exceeded in size by Texas and California. In 1870 the total population of Dakota was 14,000, and for many succeeding years the progress of settlement was quite slow. Since 1879, however, the inflow of people, especially into the wheat lands in the northern part of the Territory, has been extraordinary. It is estimated by competent authorities that the number of inhabitants in the spring of 1883 amounted to 325,000, and that the great majority of the new-comers were attracted by the profits of wheat-raising. The mass of immigration has settled upon the prairie lands which stretch out, with little interruption, for a distance of fifty miles on either side of the Northern Pacific Railroad, the entire length of the Territory. The glory of this great belt of country is its fertile soil, and a climate perfectly adapted to the production of cereals. This region already plays an important part in the wheat-growing area of the United States, a yield of twenty bushels per acre being usual, and twenty-five bushels not an extraordinary crop. The general character of the land is that of a rolling prairie, interspersed with broken butte formations west of the Missouri river. The entire country is fairly watered by the Red River of the North, the Sheyenne, the Dakota or James, the Missouri and other streams, with their many tributaries, as well as by numerous lakes in the northern and

eastern portions, some of which are of great size and beauty. Good well water is everywhere found by digging to a reasonable depth.

In 1880, just six years after the capacity of the soil was first tested in the valley of the Red river, the yield of wheat along the line of the railroad was about 3,000,000. In 1881, so great was the increased acreage, there was a product of 9,000,000, and in 1882 the crop was 12,000,000. Since then it has continued to increase yearly. The wheat of northern Dakota has no equal for milling purposes. It is preferred by the great millers at Minneapolis and elsewhere throughout the United States to any other variety, being best adapted to the modern methods of making flour. It is raised from seed known as Scotch Fife, and, when clean and of full weight, is graded in markets as "No. 1 hard," bringing an excess of ten or fifteen cents per bushel over the soft varieties. Under the new process of manufacture it has been demonstrated that flour produced from hard spring wheat is a far more profitable commodity than that made from winter wheat. For example, bakers are able to get 250 pounds of bread from a barrel of flour made from the hard spring wheat, and only 225 pounds from the same quantity of flour which is ground out of winter wheat.

**Prairie Farming.**—The cultivation of the soil in a prairie country is, in some of its processes, very different from the methods pursued elsewhere, and has given rise to at least two new technical terms, which are known as "breaking" and "backsetting." Premising that the prairie soil is free from roots, vines or other obstructions, and that the virgin sod is turned from the mould-board like a roll of ribbon from one end of a field to the other, a fact is presented which farmers who are accustomed to plow among stones, stumps and roots, can scarcely grasp. But the sod thus turned is so knit together by the sturdy rootlets of the rank prairie grass that



Plowing on a Bonanza Farm.  
[By permission of Harper & Brothers, New York.]

a clod of large size will not fall apart even though it be suspended in mid-air. To "break" or plow this mat, therefore, it is necessary to cut it, not only at the width of the furrow it is desired to turn, but underneath the sod at any thickness or depth as well. An ordinary plow could not endure the strain of breaking prairie soil, so plows called breakers have been constructed to do this special work.

Usually, three horses abreast are employed, with a thin steel, circular coulter, commonly called a "rolling coulter," to distinguish it from the old-fashioned stationary coulter, beveled and sharpened for a few inches above the point of the plow to which it is attached. A furrow is broken sixteen inches wide and three inches thick, and the sod, as a rule, is completely reversed or turned over. Each team is expected to break sixteen miles of sod, sixteen inches wide and three inches thick, for a day's task. By cutting the sod only three inches thick, the roots of the grasses, under the action of heat and moisture, rapidly decay. The breaking season begins about the 1st of May, and ends about the 1st of July. The wages of men employed at this kind of work are \$20 per month and board. The estimated cost of breaking is \$2.75 per acre, which includes a proportionate outlay for implements, labor and supplies. But the ground once broken is ready for continued cultivation, and is regarded as having added the cost of the work to its permanent value. The "broken" land is now with propriety termed a farm.

"Backsetting" begins about the 1st of July, just after breaking is finished, or immediately after the grass becomes too high, or the sod too dry, to continue breaking with profit. This process consists in following the furrows of the breaking, and turning the sod back, with about three inches of the soil. In doing this work, it is usual to begin where the breaking was begun, and where the sod has become disintegrated, and the *vegetation* practically decomposed. Each plow, worked by



two horses or mules, will "backset" about two and a half acres per day, turning furrows the width of the sod. The plows have a rolling coulter, in order that the furrows may be uniform and clean, whether the sods have grown together at their edges or not. The "backsetting" having been done, there only remains one other operation to fit the new ground for the next season's crop. This is cross-plowing (plowing crosswise, or across the breaking or backsetting), or so-called fall plowing, which is entered upon as soon as the threshing is over, or on damp days during the threshing season. A team of two mules will accomplish as much cross-plowing in a day as was done in backsetting,—two and a half acres. The wages for backsetting and fall plowing are also \$20 per month and board, or \$1.50 per acre to hire the work done.

The virgin soil, having been broken, backset and cross-plowed, is now ready for seeding. This, ordinarily, begins from about the middle of March to the 1st of April, and is often not finished until the 1st of May. Instead of the old style of hand sowing, a broadcast seeder is used, one of which machines will sow twelve acres a day. Fifty-two quarts of clean Scotch Fife seed wheat are used to the acre. The cost of sowing the ground is seventy-five cents per acre, and the average cost of the seed wheat, upon the larger farms, has been \$1.50 per acre. Seeding having been carefully attended to, the harrowing, or covering process, demands close attention. The grain must be evenly covered, at a uniform depth, to ensure a good stand, healthy growth and even maturity. On the so-called bonanza and systematically conducted farms, one pair of harrows follows each seeder, going over the ground from one to five times, according to the condition of the soil, until it is well pulverized, the seed evenly covered, and the surface reasonably smooth.

Harvesting on the large farms begins about the 1st of August. Self-binding harvesters, one to every 160 acres, are



Seeding on a Bonanza Farm.  
[By permission of Harper & Brothers, New York.]

employed, and one driver and two shockers are required to each machine. The wages during the harvest season are \$1.50 to \$2 per day and board.

The work on a wheat farm only occupies a few weeks in the year, and the business is attractive on that account, apart from the profits. After the plowing and seeding are finished, the farmer can look on, and see Nature grow and ripen his crop, until the harvest time comes. By the end of August the year's work is practically done. Expensive farm buildings are not required; for the grain may be threshed in the fields, and hauled immediately to the nearest railroad station. Very little fencing is needed on a wheat farm. Frequently the cultivated portion is left unenclosed, and a barbed wire fence is put around the pasture lot to secure the cattle. The outlay for improvements is comparatively light; and, as the country is open and ready for the plow, the settler makes a crop the first year, and is tolerably independent from the start. A village, with school-house, postoffice, stores and churches, springs up, as if by magic, in the neighborhood of his home, and he suffers few of the privations which used to attend frontier life.

The extent of the Northwestern wheat region can not now be estimated, nor its future productiveness foreseen. It includes nearly the whole of Dakota east of the Missouri river, and a considerable portion of the western half of the Territory. The wheat-growing industry has been steadily moving west for more than half a century, and the rich lands of the Red River Valley of the North, and the vast rolling plains of Dakota and the Pacific Northwest, must ultimately be the permanent wheat field of the continent.

**Cost of Farming New Land.**—Settlers on the line of the railroad have the option of taking 320 acres of the public lands by complying with the liberal terms of the Homestead Law and the Tree Culture Act, or of buying good agricultural



land, on easy terms, from the railroad company. In either case the cost of opening a farm is the same, and the expense of preparing prairie soil is :

	PER ACRE.
Breaking.....	\$2 50
Backsetting .....	1 50
Seed (taking one year with another).....	1 50
Putting in crop.....	1 00
Cutting, binding and shocking.....	2 00
Threshing and marketing.....	2 50
	<hr/>
	\$11 00

The cost of a crop from stubble ground, after the farm is opened, in the second and succeeding years, would be as follows :

	PER ACRE.
Fall plowing .....	\$1 75
Seed wheat .....	1 50
Putting in crop.....	50
Cutting, binding and shocking .....	2 00
Threshing and marketing.....	2 50
	<hr/>
	\$8 25

These estimates are on the basis of hiring the labor and machinery. If a farmer owns his own team and implements, he can reduce the cost about \$2 per acre. The expense of the buildings, teams, machinery and household effects necessary to open wheat lands and keep them under cultivation is \$10 per acre, and this is called the permanent working capital. From this it is evident that the outlay for raising the first crop on a prairie farm is \$20 per acre.

The ordinary farmer of 160 acres generally puts about \$3 per acre into a house, \$2 per acre into a stable, and provides himself with two spans of mules or horses, one gang plow, one seeder, two pairs of harrows, one mowing machine, one self-binder and one wagon, hiring an itinerant thresher at a fixed price per bushel. The new-comer usually does not care to



Harrowing on a Bonanza Farm.  
[By permission of Harper & Brothers, New York.]

break up his entire 160 acres the first year, but gets his farm in condition gradually, working part of the time for his older neighbors. In this way he earns a living for himself and family until his own crop is harvested.

The agricultural products include the whole range of those common to the Northern States. Oats and barley yield largely, the former running from forty to sixty bushels per acre, and selling for forty-five cents per bushel, and the latter for seventy-five cents. Dairying is not carried on to a great extent. The country, however, is well adapted to dairy farms, as the native grasses of northern Dakota, particularly the blue-joint and high prairie grass, are as nutritious as the cultivated grasses of the Middle and Eastern States. Stock-raising is profitable.

One of the principal factors in profitable wheat culture is easy and cheap transportation. The farmer of northern Dakota is amply provided for in this respect. He has the choice of two outlets for his grain and other products. It is only 250 miles from the Red river to Lake Superior, whence wheat is shipped via Duluth and Superior City to the markets of Buffalo and New York, while the immense mills at the Falls of St. Anthony, in Minneapolis, create a demand which has never yet been fully satisfied. The uniform rate of freight for carrying wheat adopted by the railroad gives every shipping point on the line equal advantages in the cost of getting grain to market.

**Prairie Soil and its Constituents.**—From an essay of Dr. Charles Louis Fleischmann, of Washington, a recognized authority in scientific agricultural affairs, the following interesting extracts are made :

“If nature had not stored up in the far West immense tracts of inexhaustible masses of vegetable mould, enabling farmers to keep up their lands in a high state of fertility, the ruinous system which has well-nigh worn out the lands of the Eastern



States would be continued until every remaining acre would become exhausted.

"This extraordinary accumulation of vegetable mould extends over a large part of the Northwest. Some of the States possess more prairies than others. Iowa, for instance, is one-third prairie land, and the northern part of Minnesota is almost a continual prairie.

"We may assume that there are at least 100,000,000 acres of prairie lands which contain all the elements as well as the inorganic substances which plants require for a perfect development. This valuable accumulation of mould varies from two to six feet in thickness, and often even more. It is free from all admixture of earthy substances, such as clay, sand, etc., and, in a dry state, the prairie soil has no cohesion, but crumbles to dust. It absorbs water very rapidly, and loses it equally as fast. When wet its color is coal black; when dry it turns gray. In the upper layer it contains some carbon, and burns like very poor peat, leaving a large amount of ashes. When the prairie soil is exposed to the blast of a forge, it melts and backs together like slag, consisting mostly of silicate of potash. Like all decayed vegetable matter, it contains a large amount of ammonia.

"The prairies of the Northwest were once lakes, some of which were of considerable extent. As the rivers cut deeper channels these lakes were gradually drained of their waters. In their beds sprung up aquatic plants; and, after many, many centuries, large accumulations of vegetable mould were deposited. Finally, when the lakes were completely drained, the vegetation changed, and upon the nymphaeous remains more nutritious plants sprung up, and formed pastures for buffaloes and other herbivorous animals. According to this theory, the first layer of vegetable mould must contain a large amount of carbon, because the aquatic plants, having been protected by the water against fire, would have carried their entire carbon into their watery grave. From this first layer of decayed plants the succeeding vegetation must have drawn its nutriment of inorganic substances, as the roots could not have passed through the whole thickness of the vegetable mould to seek food in the mineral subsoil of the bed of the lake; but the original accumulated carbon was left. According to this view, the upper layer, or surface stratum, contains the original

inorganic substances which were taken from the mineral subsoil. Consequently, the productiveness of the prairies, and their durability for producing crops, depend on the thickness of the surface layer.

"This shows how important an accurate examination of the prairie soil is to the farmers of these regions.

"How long it took to produce that enormous mass of vegetable mould can only be conjectured. Let it be assumed that a crop of one year from an acre of prairie amounts to 2,000 pounds of dry grass, yielding about 130 pounds of inorganic substances, and on an average of 1,500 pounds of carbon. When these 1,630 pounds of decayed vegetable matter are scattered over one acre of 43,560 square feet, every square foot of land would receive a delicate film of ashes, and it would require at least 500 such films of ashes to produce one inch, or 6,000 to make one foot, in thickness. Consequently it must have taken about 36,000 years to produce six feet in thickness of vegetable mould.

"The ash constituents of grasses differ very little in the various species, so that they result in no great difference in the fertility of the prairie soils. A crop of dry grass, weighing 2,000 pounds, yields on an average 130 pounds of ashes, which contain: potash, 34; soda, 9.5; magnesia, 6.6; lime, 15.5; phosphoric acid, 8.2; sulphuric acid, 6.8; silica, 39.3; chlorides, 10.6; and sulphur, 2.4. This would be the average contents of ash constituents in the prairie soil, giving all the substances which the cereals require.

"When a crop of wheat or corn is taken from that soil, provided the straw is returned to the soil in any shape whatever, the crop consumes only a portion of the plant constituents of a single hay crop, with the exception of the phosphoric acid, which is entirely extracted by a wheat crop from the ashes of a hay crop. For example, 1,000 pounds of wheat yield 17.7 parts of ashes, which contain 5.5 potash, 0.6 soda, 2.2 magnesia, 0.6 lime, 8.2 phosphoric acid, 0.4 sulphuric acid, 0.3 silica, and 1.5 sulphur.

"According to the above, one layer of the ashes of hay, of the thickness of finest paper, spread over an acre, would produce a wheat crop of twenty bushels. Therefore, a thickness of one inch of prairie soil would furnish 500 wheat crops. *Speculations* on paper do not always agree, however, with



practical experience. So much is sure, nevertheless, that the prairie soil is exceedingly rich in the ash constituents of plants, and it will serve for a long time for the production of cereals.

"Yet prairie farmers must bear in mind that the vegetable mould is of a different nature from the earthy or mineral soils, like clay or sand. The prairie soil contains only a certain amount of the inorganic substances necessary to the growth and perfect development of plants. When one of the inorganic constituents is exhausted, it can not be replaced by fallowing or mechanical means, as is the case with the mineral soils, which, by the disintegration of the coarse, earthy substances, replace again the lacking constituent.

"When the straw of wheat crops is not burnt, and the ashes returned to the soil, the prairie soil will lose silica, and the succeeding crops will show a certain weakness in the stem of the straw.

"In view of the formation, extent, richness and importance of the vegetable mould of our Northwestern prairies, it is established to a certainty that the United States is in possession of one of the greatest treasures in existence, which is not surpassed in value and importance by all the precious metals in the bowels of the earth. If only one foot in depth of prairie soil were set aside for manuring purposes, leaving two-thirds of that soil for future cultivation of the prairie region, the portion destined for manure would amount, in round numbers, to one hundred and thirty billions of tons.

This quantity would be large enough to restore all our exhausted soil, besides improving the mineral lands and meadows of the Northwest, thus enabling the farmer not only to raise all the breadstuffs and meat for our rapidly increasing population for all time to come, but to assist other nations in case of need.

"If farmers do not burn the wheat straw, and faithfully return the ashes to the fields, there must necessarily be a falling off in the fertility of the soil. The straw requires, for each 2,000 pounds in weight, fifty-six pounds of silica,—sixteen pounds more than a hay crop would furnish. The soil, therefore, is not able, after many wheat crops have been taken away, to provide the straw with sufficient silica, and its ability to

support the ear is lessened, causing the stalk to lodge, and producing an imperfect crop. This being the case, the lacking silica must be furnished by the addition of a mineral soil, in order to make the prairie soil compact, and prevent the wheat straw from lodging. An addition of pure sand would even subserve this purpose."

**Philological and Historical.**—Dakota is named after the great Indian nation who once claimed a large portion of the Northwest for their own. The Northern Indians are divided into two great families: the Algonquins, which include the Chippeways, or Ojibways, the Ottawas, the Crees and a host of others, and the Dakotas, or Sioux, who are divided into many smaller bodies, all speaking the Dakota language. The only difference is, that the Dakotas east of the Missouri use a D, where those west use an L. For example, those east say "codah" (friend); those west, "colah" (friend). Those east call themselves Dakotas; those west, Lakotas. The Lissetons, Wahpetons and Mandawatons, who lived in Minnesota, were called Santees. The Yanktons, Yanktonais, Brulé, Cuthead, Ogallas, Two Kettles, and a score of other bands are Sioux. Nicolet, Catlin and others say that they are one of the finest specimens of wild men on the earth. For a generation they were our devoted friends. Our first fight with the Sioux was near Fort Laramie. Some Mormons who were crossing the plains to Utah had a lame ox, which they turned loose to die, and a camp of Indians found and killed it, and made a feast. The Mormons saw this in the distance, and, thinking they could secure payment, stopped at Fort Laramie, and told the officer in command that the Indians had stolen their ox. The officer, who was half drunk, took some soldiers, went to the Indian village, and demanded the ox. The Indians said: "We thought the white men had turned them loose to die. We have eaten the ox; if the white men want pay for him, you shall have it out of our next annuity." "No," said the



drunken officer; "I want the ox, and, if you do not return him, I will fire upon you." He did fire on them, and killed a chief. The Indians rallied, and exterminated the command. That war cost one million of dollars.



## FARGO & SOUTHWESTERN BRANCH RAILROAD.

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FROM FARGO TO LAMOURE.—DISTANCE, 88 MILES.

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This important branch of the Northern Pacific country has recently opened to settlement one of the finest agricultural regions in Dakota. The road now extends to LaMoure, on the James river, 88 miles from Fargo, its general course being southwest, as indicated by its name. The country traversed is for the first forty miles level prairie, then becomes slightly rolling, and the uneven character of the ground increases after the Sheyenne river is crossed at Lisbon. Between Lisbon and LaMoure the drainage for the most part is into numerous small lakes and ponds. The whole country is of almost uniform fertility.

**Horace** (11 miles from Fargo) is a small station at the first crossing of the Sheyenne river. The course of this stream across the prairie is marked by a belt of timber. *Davenport* (19 miles from Fargo; population, 100), a branch of the St. Paul, Minneapolis & Manitoba Railroad, running from Wahpeton to Mayville, crosses the Southwestern Road at this place. *Leonard* is an unimportant station. *Sheldon* (41 miles from Fargo; population, 250).—This town is the trading centre for a considerable extent of country, which is fast filling up with a thrifty farming population. It has numerous stores and shops, a church and a school-house. *Buttsville* is a small village.

**Lisbon** (56 miles from Fargo; population, 1,500).—The city is very pleasantly situated on the Sheyenne river, being sheltered by forests and towering bluffs. Lisbon was first started in 1881, when few people had settled in Ransom county, and, although for some time it had no railroad facilities nearer than thirty-five miles, its growth has been remarkable. From a mere speck in the valley, it has risen to a thriving city of 1,500 inhabitants, with a full city government. Educational interests have been well looked after. A fine two-story school building, with four rooms, has lately been finished. There are five church organizations; namely, Presbyterian, Methodist, Baptist, Episcopalian and Catholic, and three weekly newspapers. There are grain warehouses, an elevator, two banks, two brick yards, a machine shop and foundry, four hotels, and all the stores and shops which are needed to carry on the large trade of the rich agricultural region of which Lisbon is the centre. The soil, for at least fifty miles in every direction from Lisbon, is a black, sandy loam, with a clay subsoil, and for the production of wheat, oats, corn, barley, flax, peas, root crops and vegetables generally, is not excelled. The average product per acre of wheat is twenty-two bushels; of oats, fifty bushels. A flouring mill, driven by water-power, is in operation, and several other water-powers near the city invite the establishment of manufacturing enterprises.

Ransom county, of which Lisbon is the county seat, is one of the finest agricultural counties in North Dakota. A larger proportion of the wheat raised in this county in 1884 graded No. 1 than of any other county in the Territory. Indian corn is successfully cultivated, and frequently yields 150 bushels of ears to the acre. *Marshall* and *Verona* are unimportant stations between Lisbon and LaMoure. Considerable quantities of wheat are shipped from these stations.

**La Moure** (88 miles from Fargo, and 365 miles from St.

Paul; population, 750), the present terminus of the Fargo & Southwestern Branch, is situated on the James river, from 1,400 to 1,500 feet above the sea-level, with a gradual slope to the river, affording fine drainage, the surrounding country being chiefly a beautiful, slightly undulating prairie, which has beneath several feet of black loam, a subsoil of silicious marl, with a heavy clay beneath for a considerable depth. Such a soil is admirably adapted to the production of wheat.

La Moure has three hotels, one of them a handsome brick structure costing \$25,000, two banks, a newspaper, flour mill, grain elevator, about twenty stores, Presbyterian church and a large public school building. The James river is navigable to this point, and steamers occasionally come up from Columbia. The town was first established in 1883, and has had a rapid, substantial growth. The railroad will finally be extended to some point on the Missouri. The James River Valley Railroad, following the course of the James river, was opened from Jamestown, fifty-five miles north of La Moure, to La Moure in 1885. It is being extended southward to connect with the railway system of southern Dakota.

**Farming in the Vicinity of La Moure.**—The soil of the middle James river valley, of which La Moure is the commercial centre, is peculiarly suitable for the growth of all cereal and root crops. The No. 1 hard wheat grown here has made itself famous in the markets of the world, and has been shown, by the official analysis of the Agricultural Department in Washington, to surpass all the wheats grown in any other part of the United States, in weight, nutritive qualities, etc. It is grown entirely from Saskatchewan Fife, Scotch Fife, and other hard varieties of seed; oats grow most abundantly, and the varieties most generally used are the White Russian, White Belgian, Prize Cluster and Welcome. One yield, well authenticated, ran in 1884 up to 119 bushels to the acre. Magnificent crops of barley are raised, of the Chevalier, Six-Rowed

and other fine varieties. Some Chevalier barley, grown ten miles from the town of La Moure, averaged sixty bushels to the acre last season. Farmers have also lately turned their attention to raising corn, and good crops have been harvested in excellent condition in 1884. Flax, millet, etc., are also being grown here with great success. As to the general quality, excellence, etc., of the wheat grown here, it suffices to say, that, of the vast quantity which has passed through the La Moure elevator in 1884, seven-eighths of the entire bulk graded No. 1 hard. As to roots, all kinds grow here in profusion; turnips, mangel-wurzel, beets, potatoes, and all kinds of garden vegetables. For size, weight, cleanness, uniformity, entire freedom from worms, etc., the potatoes of this country can hardly be equaled, certainly not surpassed, throughout the United States. Cattle thrive and fatten themselves for market on their prairie pasturage. The local meat markets are supplied by the neighboring farmers with excellent beef, and none of it is specially fattened for the purpose, or fed upon grain.



DAKOTA DIVISION.

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FARGO TO MANDAN.—DISTANCE, 199 MILES.

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**Fargo** (277 miles west of St. Paul ; population, 10,000).—This city, the county seat of Cass county, Dakota, 242 miles west of Lake Superior, is situated on the western bank of the Red river, which, though a very tortuous stream, is the constituted boundary line between the State of Minnesota and Dakota Territory. This is the largest city in the Territory of Dakota, and is the principal trade centre of the northern portion of the Territory. It is often called the metropolis of the Red river valley. The importance of Fargo is largely due to the railroad system of which it is a central point. The arrivals and departures of passenger trains number twenty-six daily. There is a rail connection east, west and southwest by the Northern Pacific line, another northwest and southeast by the lines of the St. Paul, Minneapolis & Manitoba, and south by the Fargo Southern, while the Moorhead Northern affords a northerly route on the eastern bank of the Red river. The steam navigation of the river is not as important a feature in the traffic movement of the town as it was a few years ago, but is still of considerable value, furnishing cheap transportation to the farmers in the immediate vicinity of the river banks. The growth of Fargo began when the Northern Pacific reached the Red river, late in 1871 ; but it was very *slow* until the large wheat firms in the vicinity, opened as a



rather hazardous experiment by Oliver Dalrymple, had demonstrated the remarkable fertility and great agricultural value of the Red river valley. From that time till the present the growth of Fargo has been rapid, and the increase in business almost marvelous. Fargo is a lively type of a new Western town, with all the modern improvements, including street cars and electric lights. Many important manufactories have been established. There are many hotels, seven churches, three daily newspapers, two public halls, an opera house, two other theatres, a court house, a high school, a driving park, fair grounds, etc., and also many wholesale houses, comprising dry goods, drugs, provisions, clothing, hardware, lumber and agricultural implements.

The banks of Fargo at present number four, two of which are organized under the National Banking Act, and two as private banks. All own the buildings wherein they do business, the First National having a handsome two-story block on the corner of Front and Sixth Streets. The Northern Pacific Railroad has here a round-house, repair shops and rail mills. The Fargo Car Wheel and Iron Works and the Fargo Paper Mill Company are establishments which alone employ from 200 to 300 men. The several lumber yards annually sell many million feet of building and finishing material. Three planing mills, two breweries, costing respectively \$100,000, and a flouring mill, with a capacity of over 400 barrels of flour daily, give evidence of the progress which the city is making. The Northern Pacific Elevator Company has its headquarters in Fargo, owning over fifty elevators and as many more warehouses scattered over Dakota and northern Minnesota on the lines of the Northern Pacific and Manitoba Railroads. Three large elevators, with a capacity of over half a million bushels, are in operation. The city has a prosperous building association, with \$600,000 capital, which has already erected a large number of residences. The Fargo Improvement Company,

with \$200,000 capital, is also meeting to some extent the wants of new-comers in this direction by the erection of business blocks and warehouses, as well as dwellings. The Chamber of Commerce, composed of the representative business men of the city, is an organization which exerts an active influence upon the best interests of the place. The principal streets and the larger business houses are lighted by electricity, and a tower, 200 feet in height, carries at its apex 20,000 candle-power lights. Fargo has a well-organized and fully equipped fire department, with five companies. The educational facilities of the place are exceptionally good. The school-house, near the court house, has been enlarged from time to time, as the constantly increasing needs of the population have demanded. The High School, situated on Adams Avenue, cost \$40,000. Several ward schools also have been established. The water supply is drawn from works constructed on the Holly system. The capacity of the works is 3,000,000 gallons per diem. Many miles of mains have been laid, and the requisite public hydrants are in place. The city supplies farmers within a radius of at least fifty miles. *Canfield*, eight miles west of Fargo, and *Haggart*, six miles, are side-track stations.

**Mapleton** (289 miles west of St. Paul; population, 450).—This town possesses a steam elevator and warehouses, two hotels, one hall, a church, general stores, and one of the finest and best appearing school-houses in North Dakota. It is in the midst of a fertile region.

**Green** (292 miles west of St. Paul).—This station is in the midst of the great Bonanza farm, formerly known as the Williams farm, which is noted as having given its proprietors a profit of nearly \$60,000 in the last two wheat crops, and affords better prospects each succeeding year. Mr. Green has the handsomest grove of young trees along the line of the Northern Pacific Railroad. Three miles west of Green is *Dalrymple Station*,



Harvesting on a Bonanza Farm.

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the shipping point of a farm 20,000 acres in extent, which is owned by Mr. Oliver Dalrymple, the famous wheat grower, after whom the place is named.

**Bonanza Farming.**—A peculiarity of wheat-growing in Dakota is the grand scale upon which it is frequently conducted. Prior to 1875 it was declared, upon high army authority, that beyond the Red river the country was not susceptible of cultivation; in going west from that stream to the James, there was some fair land, but much that was useless; and thence to the Missouri there was little or no available area, except the narrow valleys of the small streams; in fine, with the exceptions named, that the country was practically worthless. This sweeping statement gained wide publicity, and caused much hesitation with respect to undertaking the cultivation of the Dakota prairies. But Messrs. George W. Cass and Benjamin P. Cheney, both heavy capitalists, and Directors in the railroad company, having faith in the fertility of the land, determined to test its capacity for wheat production. They first bought, near the site of the present town of Casselton, 7,680 acres of land from the railroad company, and then secured the intervening government sections with Indian scrip, thus obtaining compact farming grounds of enormous area. Mr. Oliver Dalrymple, an experienced wheat farmer, was engaged to manage the property; and in June, 1875, he turned his first furrow, plowing 1,280 acres, and harvested his first crop in 1876. The acreage was increased in each succeeding year, until in 1882 there were not less than 27,000 acres under cultivation. This immense farm does not lie in one body. One part of it, known as the Grandin farm, is situated in Traill county, thirty miles north of Casselton. The entire area embraced by the three tracts is 75,000 acres. Farming operations conducted on so gigantic a scale, seem almost incredible to persons who are only familiar with the methods of the *older and more settled States*. In managing the affairs of a

"bonanza farm" the most rigorous system is employed, and the cost of cultivation averages about \$1 per acre less than on smaller estates. The plan adopted by Mr. Dalrymple and all the other "bonanza" men is to divide the land into tracts of 6,000 acres each, and these are subdivided into farms of 2,000 acres each. Over each 6,000 acres a superintendent is placed, with a bookkeeper, headquarters building, and a storehouse for supplies. Each subdivision of 2,000 acres is under the charge of a foreman, and is provided with its own set of buildings, comprising boarding houses for the hands, stables, a granary, a machinery hall and a blacksmith's shop, all connected with the superintendent's office by telephone. Supplies of every description are issued only upon requisition to the several divisions. Tools and machinery are bought by the car load from manufacturers; farm animals are procured at St. Louis and other principal markets; stores of every description for feeding the army of laborers, are purchased at wholesale; and the result of the thorough system and intelligent economy in every department is found in the fact that wheat is raised and delivered at the railroad at a cost varying little from thirty-five cents per bushel. The net profit on a bushel of wheat is seldom less than twenty cents, and the average yield per acre may safely be put at twenty bushels, although it often exceeds that quantity. Taking the lowest figures as a basis of calculation, the profits in 1882 on the 27,000 acres which Mr. Dalrymple had under cultivation, were not less than \$216,000! No wonder that farming on this scale is called bonanza farming.

On this great farm, or, rather, combination of farms,—the 20,000 acre tract at Casselton,—400 men are employed in harvesting, and 500 to 600 in threshing. Two hundred and fifty pairs of horses or mules are used, 200 gang plows, 115 self-binding reapers, and twenty steam threshers. About the 1st of August the harvester is heard throughout the length and breadth of the land, and those who have witnessed the opera-



tion of securing the golden grain will never forget the scene. The sight of the immense wheat fields, stretching away farther than the eye can reach, in one unbroken sea with golden waves, is in itself a grand one. One writer describes the long procession of reaping machines as moving like batteries of artillery, formed *en échelon* against the thick-set ranks of grain. Each machine is drawn by three mules or horses, and with each gang there is a superintendent, who rides along on horseback, and directs the operations of the drivers. There are also mounted repairers, who carry with them the tools for repairing any break or disarrangement of the machinery. When a machine fails to work, one of the repairers is instantly beside it, and, dismounting, remedies the defect in a trice, unless it prove to be serious. Thus the reaping goes on with the utmost order and the best effect. Traveling in line together, these 115 reaping machines would cut a swath one-fifth of a mile in width, and lay low twenty miles of grain in a swath of that great size in the course of a single day. "Carleton," a correspondent of the *Chicago Tribune*, described the reaping scene thus:

"Just think of a sea of wheat containing twenty square miles,—13,000 acres,—rich, ripe, golden,—the winds rippling over it. As far as the eye can see there is the same golden russet hue. Far away on the horizon you behold an army sweeping along in grand procession. Riding on to meet it, you see a major-general on horseback,—the superintendent; two brigadiers on horseback,—repairers. No swords flash in the sunlight; but their weapons are monkey-wrenches and hammers. No brass band, no drum-beat or shrill note of the fife; but the army moves on—a solid phalanx of twenty-four self-binding reapers—to the music of its own machinery. At one sweep, in a twinkling, a swath of 192 feet has been cut and bound,—the reapers tossing the bundles almost disdainfully into the air,—each binder doing the work of six men."

**Cassleton** (297 miles west of St. Paul; population, 1,000) is a thriving, bustling town, the situation of which is very



advantageous, being in the midst of one of the finest wheat-raising districts in Dakota. The first house at Casselton was built by the railroad company in 1877, and during that winter there were only four inhabitants in the place. In the spring of 1878 the first business house was put up. Improvements have been going on ever since, and the growth of the town has been steady. It has no bonded indebtedness, which speaks well for the business qualifications and thrift of the community. It was incorporated in the summer of 1880. It has an organized fire department. The business of Casselton is represented by nine mercantile concerns, five hotels,—one with accommodations for 200 guests,—one bank (the National), lumber yard and two wheelwright shops. There are two elevators, with a capacity of 200,000 bushels, and a large and well-equipped flouring mill, two public halls, two newspapers and four churches. The public schools are efficiently organized under the graded system, and are in successful operation.

The farmers of Casselton, in speaking of the excellence of their opportunities, say that they do not suffer materially, either in wet or dry seasons. The farms lie just high enough to be secure from the overflow of the Red river. Good well water can be obtained at a depth of twenty-two to twenty-five feet. There are three artesian wells in the vicinity, one being six and a half miles south of this point, another nine miles north, and the third at the Casselton mill.

From Casselton a branch line of the St. Paul, Minneapolis & Manitoba Railroad runs to Portland and Hope, and another runs north to Mayville, and the Breckenridge Branch of the same railroad runs southeast to Breckenridge.

**Wheatland** (303 miles west of St. Paul; population, 450).—This town is established upon the dividing ridge that separates the magnificent black soil of the Red river valley from the undulating prairie beyond toward the Sheyenne, and is supplied with general stores, two hotels, a school-house, which is

also used for church purposes, a newspaper, and an elevator of 60,000 bushels capacity. It is the trading point for numerous small farmers, and also the headquarters for several large bonanza farm interests in the vicinity.

**Buffalo** (313 miles west of St. Paul ; population, 450).—Buffalo is an incorporated village, and the trading point for farmers in its vicinity, the exports being principally wheat, oats and potatoes. It has an altitude of 575 feet above the level of Fargo. The surrounding country is an even, unbroken prairie, as far as the eye can reach. The first settler came to Buffalo in 1878, and took a claim about one-half mile north of the present village. The town was laid out in May, 1878, and the first house was occupied as a store, postoffice and dwelling. The same year the railroad depot and a blacksmith shop were erected. There are an elevator, with a capacity of 75,000 bushels ; general stores, three hotels and a number of various mechanics' shops.

North of Buffalo, and adjacent thereto, will be found the bonanza farms of Ex-General Manager Sargent of the Northern Pacific ; Colonel Rich, of Michigan ; T. D. Platt, and others.

**Tower City** (319 miles west of St. Paul ; population, 800).—This town, named in honor of Charlemagne Tower, of Philadelphia, Pa., a former Director of the Northern Pacific Railroad, is on the western edge of Cass county. It was laid out in April, 1879, by George H. Ellsbury, when there was no settlement nearer than Valley City, sixteen miles westward. The growth of the town has not been rapid ; but it has been, nevertheless, steady and healthy. The population is chiefly made up of Americans, Canadians, Germans and a few Scandinavians. The soil of the surrounding country is the rich, dark vegetable loam which characterizes Cass county. Tower City has church organizations, three of which, the Baptist, Presbyterian and Methodist, have substantial buildings ; a school-

house costing \$6,000, besides three hotels, bank buildings, substantial business blocks, handsome residences, a public hall, a newspaper, a steam elevator and a flouring mill.

The Dakota & Great Southern Railroad is to cross the Northern Pacific main line at this place.

**An Artesian Well.**—The Northern Pacific Railroad, in boring a well at Tower City, struck a vein of water at a depth of 670 feet. The water is soft, not very cold, sweet and pleasant to the taste, and its medicinal properties are said to be similar to those of the springs at Saratoga. Many persons who use the water say that it works on the kidneys in a beneficial manner, and tones up the entire system. The town has two small parks,—the Ellsbury, which is situated on the north side of the railroad, bordering on Michigan Avenue; and the Villard, just south of the railroad depot. In the centre of the latter park is a fountain, supplied with water from the artesian well. On the arrival of a train, the travelers usually make a rush for the fountain, for the purpose of testing the medicinal water.

**Oriska** (324 miles west of St. Paul; population, 100).—This place, situated midway between Fargo and Jamestown, is surrounded by thousands of acres of fertile prairie, dotted with many lakes of pure water, and a more desirable farming and stock country could scarcely be found. The soil is of first grade and of great depth, with a clay subsoil. Good water is abundant at a depth of from ten to twenty feet, being entirely free from alkaline salts, and as clear as crystal. The nutritious grasses for which this country is noted, and upon which stock thrive so finely, attain a luxuriant growth, large quantities of hay for wintering stock being cut each season. Oriska has an hotel, a church, a school, one store, an elevator with twenty thousand bushels capacity, and a lumber yard.

**Valley City** (335 miles west of St. Paul; population, 1,500) is the county seat of Barnes county. It lies in a deep valley



surrounded by an amphitheatre of hills, which rise to a height of 125 feet or more on every side of it. Circling round the valley is the beautiful Sheyenne river, a stream at this point fully seventy-five feet in width, running over gravelly beds, and fringed with sturdy oaks, elms and other woods. The Northern Pacific Railroad enters the town on its eastern side by a winding passage through the bluffs for a distance of several miles, and emerges on the steepest part of the line between Fargo and the Missouri river. The town is furnished with a fine water-power by a fall of ten feet in the river within the limits of the city proper. The Sheyenne river, to which the town owes much of its prosperity, is one of the few important rivers in Dakota. It rises in the northern part of the Territory, in the vicinity of Devil's Lake, and describes a tortuous course of nearly 100 miles before it reaches Valley City. Its waters are generally clear, and abound with fish, and its banks are skirted with timber. Along its shores in former years roamed the savage Sioux, and many a bloody conflict has taken place between warrior tribes within sight of its wooded slopes. More than twenty years have passed away since the Indians were driven across the Missouri, and the only mementoes of the red men to be found to-day are the bones of the buffalo, which lie bleaching everywhere over these Dakota prairies. The town is finely provided with wide streets and avenues, and the business and residence structures are of attractive appearance. A large proportion of the population are Americans; but there are also many prosperous, enterprising Scandinavians and Germans. Among the public buildings are an imposing court house which cost \$35,000, having ample accommodations, not only for the county officers, but for the United States Court; a brick jail built at an expense of \$10,000; one large brick hotel costing over \$30,000, besides two smaller frame ones; an opera house, four churches, a handsome *public school* house of brick; three national banks built of brick,

—the edifice occupied by the First National having been erected at a cost of \$15,000. There are three newspapers, two weekly and one daily. The city has two brick yards, also several lumber and coal yards, and a large flour mill operated by power from the Sheyenne river. *Hobart*, seven miles westward, is a small station, with an elevator for handling wheat.

**Sanborn** (346 miles west of St. Paul; population, 500).—In 1880 there was scarcely any population in the neighborhood of Sanborn; but now there is a good town here, with a great deal of land occupied and cultivated. About 300,000 bushels of wheat are shipped annually. The town has been stimulated to a rapid growth, mainly by the energy of a single enterprising business firm, and is fast acquiring an influential position. Its situation, in the midst of rich fields, with good farms a short distance away depending upon Sanborn for supplies, is very advantageous. Sanborn has one newspaper, a public hall, two hotels, two churches, two elevators, a school, two banks, several large business establishments, including hardware and agricultural implement stores, harness shops, etc. The products are wheat, oats and barley. The Sanborn, Cooperstown & Turtle Mountain Railroad leaves the main line at this place.



## SANBORN, COOPERSTOWN & TURTLE MOUNTAIN BRANCH.

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FROM SANBORN TO COOPERSTOWN.—DISTANCE, 36 MILES.

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This branch is completed to Cooperstown, 36 miles north of Sanborn. It traverses a remarkably rich prairie country for its entire length. The surface of the country grows more and more rolling as the train advances northward, until in the vicinity of Cooperstown it is diversified with numerous ridges of hills. The soil on these hills, except on their crests, where it is somewhat stony, is as valuable for farming as the level stretches between them. The way stations on the road are *Odell*, which has a grain elevator; *Dazey*, a growing village with three stores, an hotel and an elevator; and *Hannaford*, an unimportant station.

**Cooperstown** (382 miles from St. Paul; population, 500) is the county seat of Griggs county. The town was established in the spring of 1883, and in the fall of the same year the railroad from Sanborn was completed, making it a terminal point and an important centre of trade. Cooperstown has a court house built of red brick at a cost of \$30,000, which is one of the most substantial and imposing public edifices in Dakota. Trade is represented by three general merchandise stores, two hardware, one grocery, two agricultural implement establishments and a number of mechanic shops. There are



also two hotels, a large public school house and a weekly newspaper. Griggs county is one of the best parts of Dakota for mixed farming. A large part of its surface is admirably adapted for wheat culture, and there are numerous lakes and ponds, bordered by meadow lands and excellent pasturage tracts which give good facilities for stock-raising. The Sheyenne river runs through the southern part of the county, affording several good mill powers, and having on its banks numerous groves of timber, which are of great value in giving the farmers cheap fuel. The lands of the Cooper Brothers, who are among the largest land-owners in Dakota, are mostly all in Griggs county, of which 6,000 are under cultivation, the cultivated tracts lying in the vicinity of Cooperstown.



## DAKOTA DIVISION.—MAIN LINE.

[Continued from page 143.]

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**Eckelson** (350 miles west of St. Paul) is a new town, situated on Lake Eckelson, a lovely sheet of water. The land is high and rolling, the soil as rich as any in the region, and by virtue of the lake, which is thirty feet below the level of the town, a natural and perfect system of drainage is provided. Lake Eckelson—seven miles long and three-quarters of a mile wide—affords excellent opportunities for bathing, fishing and boating. A colony from Elmira, New York, has permanently established itself at this point, its members having laid plans for building improvements and farming operations on a large scale. Aside from several neat dwellings, there is a substantial and commodious school-house, which was constructed at a cost of \$3,000, and which speaks well for the people who have made this their home, two general stores, an elevator, depot, hotel, and other business establishments.

**Spiritwood** (359 miles west of St. Paul; population, 100).—Spiritwood is in the midst of a fine grain-growing country, and has several bonanza farms around it, making the town an important shipping point. The village contains one store, one school, and an elevator with 50,000 bushels capacity. Spiritwood Lake is a very beautiful spot, and its waters teem with pickerel, bass, perch, and some smaller kinds of fish. Ducks, geese and prairie chickens also abound in *this vicinity*.

**Jamestown** (370 miles west of St. Paul; population, 3,500).—This is a large, active and growing town, and is the commercial centre of an extensive region of country. It is the county seat of Stutsman county, and is situated in the midst of a rich agricultural region which is equally well adapted to wheat-raising and stock-growing. The town stands on a dry plateau on the east bank of the James, and is surrounded by ranges of sloping hills. The drainage is excellent, and the health conditions are remarkably good. The substantial character of the business buildings, the court house and school house, and the number of handsome residences attract the attention of travelers. Jamestown has eight hotels, two of them being large three-story brick structures, furnished and managed in first-class style. There are three banks, five churches,—Presbyterian, Methodist, Episcopal, Baptist and Catholic,—two daily and four weekly newspapers, one of the latter being in the German language, two breweries, a beer bottling establishment, two grain elevators, a flour mill run by water-power furnished by the river, brick and lime kilns, and about fifty mercantile houses representing all branches of trade. The North Dakota Insane Hospital, a public institution costing over \$100,000, stands on the hill about a mile south of the town. The two principal public school houses cost respectively \$14,000 and \$15,000. There is a reading-room and a circulating library. Jamestown is the headquarters of the Dakota Division of the Northern Pacific Railroad. The railway buildings here, including the round-house and machine shops, cost about \$100,000. Jamestown is the junction of the Jamestown & Northern Railway, extending 90 miles north to Minnewaukan, at the west end of Devil's Lake. The James River Valley Railroad has been graded to LaMoure, fifty miles south of Jamestown, but has not yet (1885) been finished.

Stutsman county is 36 by 40 miles in extent, and covers an



area of 1,105,920 acres, nineteen-twentieths of which are available for cultivation and pasturage. There are four streams in the county, three of which are timbered along their banks with hard wood. The banks of the streams are well defined, and contain deposits of granite and limestone, which are excellent for building purposes. There are also several fine lakes in the county fringed with trees, and the lakes and streams abound with fish. Stock-raising has been thoroughly tested as a branch of industry, and is a recognized success. Cattle, horses, sheep and hogs alike thrive.

North of Jamestown can be found the "Hawk's Nest," where Gen. Sibley had the Sioux corralled at one time. There are several battle fields in the vicinity where fierce conflicts took place between the troops and the Sioux.



## JAMESTOWN & NORTHERN RAILROAD.

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JAMESTOWN TO MINNEWAUKAN.—DISTANCE, 90 MILES.

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This important branch of the Northern Pacific system, leaving the main line at Jamestown, follows the valley of the Pipestone river for a distance of about thirty miles, the general direction being northwest; then, turning north, crosses the James and Sheyenne rivers, and terminates at Minnewaukan, at the west end of Devil's Lake. With the exception of a range of gravelly hills between the James and the Sheyenne, the whole region traversed by the road is a rich prairie, more or less rolling, and taking a leading rank among the best agricultural sections of North Dakota. Parkhurst, Buchanan, Pingree, Edmonds and Melville are the first stations on the road in the order named, north of Jamestown.

**Carrington** (43 miles from Jamestown; population, 500) was established in 1883 by the Carrington & Casey Land Company, a corporation owning large tracts of land in the vicinity of the place. It has an hotel and weekly newspaper, two elevators and numerous stores and shops, and is an important grain shipping point. It is the county seat of Foster county.

**New Rockford** (59 miles from Jamestown; population, 500) is the county seat of Eddy county, and is situated on a

prairie sloping to the west of the James river. It has an elevator and weekly newspaper, and numerous mercantile establishments, and is surrounded on all sides by stretches of fertile prairie extending as far as the eye can reach. The railroad here crosses the James river, a small stream at this point. The source of the James is about thirty miles west of New Rockford. At *Sheyenne* (70 miles from Jamestown) the Sheyenne river is crossed. It has a volume of water at this point not greater than that of the James, but becomes on its lower course an important river. *Parker* (79 miles from Jamestown) is an unimportant station. *Fort Totten* (83 miles from Jamestown) is the station for the fort of the same name, situated about ten miles distant on Devil's Lake. Near this station a fine view is had of the Antelope valley stretching out to the westward, and containing a large area of peculiarly fertile farming land.

**Minnewaukan** (90 miles from Jamestown) was established in 1884, and has had a rapid growth. It is the county seat of Benson county, and has a population of about 1,000. Its principal hotel is a summer resort for tourists who wish to enjoy the scenery of Devil's Lake and its facilities for fishing and shooting. Minnewaukan is the trade centre for a large extent of country reaching northward to the Turtle Mountains, on the Manitoba line, and westward to the valley of the Mouse river. It has a newspaper, a bank and grain elevator, a flour mill, and numerous mercantile establishments. A steamboat runs during the season of navigation between Minnewaukan and Fort Totten and Devil's Lake City.

**Devil's Lake.**—This remarkable body of water is about fifty miles in length, and has a width varying from one to five miles. It has no outlet, and its waters are strongly saline. It receives no important streams, and in consequence appears to be slowly diminishing in volume by evaporation. Well-marked *former beaches* show that the level of its waters was at one



time about twenty feet higher than at present. A considerable portion of the shore line of the lake is heavily timbered with large oak trees. These forests add greatly to the attractiveness of the lake in an open prairie country like Dakota. The waters of the lake are of a beautiful sea-green color, and are said to have possessed valuable curative properties. The lake abounds in pickerel, and is the resort of myriads of wild fowl; geese, brant and different species of wild ducks frequent its waters, and make it a favorite resort of sportsmen.

The Indian name is Minnewaukan, which means "spirit waters." The lake was believed by the Indians to be haunted; and there is a legend which relates, that a party of Sioux Indians once attempted to cross it in boats, in spite of the warnings of the medicine men, and that their canoes were seized in the middle of the lake by some mysterious power, and dragged to the bottom, so that neither boats nor voyagers were ever seen again. Since that time the Indians never venture upon the lake in any sort of craft.

A large portion of the southern side of the lake is occupied by the reservation of the Cut-head Sioux Indians, who number about 2,000 souls, and are peaceable and tolerably industrious, cultivating small spots of grain and potatoes, and keeping cattle and horses. They are mainly Catholics in religion, and there is a mission for the reservation, under the management of the "Gray Nuns," where the Indian children are educated.

**Fort Totten.**—This military post is situated on the southern shore of the lake, about midway between its eastern and western extremities. The buildings are substantial brick structures, and the fort has a more permanent appearance than is usual with frontier military stations. There are two small hotels at the fort which accommodate tourists and sportsmen. A steamboat runs to Minnewaukan, and also to

Devil's Lake City, a town of about 2,000 inhabitants, at the head of a deep bay on the northern shore of the lake, which is the terminus of one of the branches of the St. Paul, Minneapolis & Manitoba Railroad.



## MOUSE RIVER BRANCH.

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FROM CARRINGTON TO SYKESTON.—DISTANCE, 13 MILES.

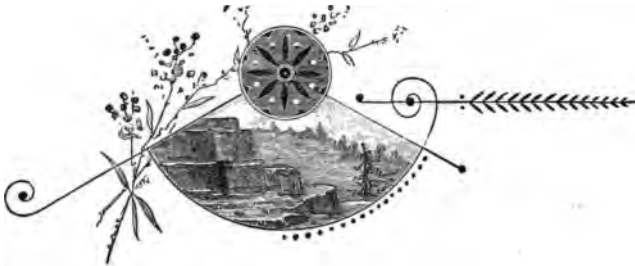
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This branch leaves the Jamestown Northern Pacific at Carrington, and runs due west to Sykeston, a distance of 13 miles. From Sykeston it will be continued in a northwestern direction to some point in the valley of the Mouse river, a further distance of about 75 miles, traversing for its entire length a rolling prairie country having the general characteristics as to fertility, of the country between Jamestown and Carrington.

**Sykeston** (13 miles from Carrington, and 56 miles from Jamestown; population, 300) is the county seat of Wells county, and is situated near the source of the Pipestone river, and a short distance from the bold elevation known as the "Hawk's Nest," which is a sort of abutment of the coteaux, and is a conspicuous object in the landscape for many miles around. Sykeston is a town created by the real estate and farming operations of the English company of Sykes & Hughes. This company owns and farms large tracts of land in the vicinity, and makes active efforts to attract American emigrants to this portion of the Northern Pacific.

**The Mouse River.**—The Mouse or Souris river heads in the Canadian Province of Assiniboia, and, running in a southeasterly direction, enters Dakota, and makes, near the limits of that Territory, a long curve, turning northward and

entering Manitoba, and finally emptying into the Assiniboine river. Its course near the Territory of Dakota is nearly 200 miles. It is bordered by rich bottom lands, and drains a handsome rolling prairie region, which has a peculiarly luxuriant growth of native grasses. There are a few settlements near the bend of the river; but the entire region is practically a new country waiting the railroad to attract a large agricultural population. The chief town is *Villard*, which has a newspaper and several stores. Good coal is found at various points on Mouse river.



## THE JAMES RIVER VALLEY RAIL- ROAD.

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JAMESTOWN TO LAMOURE.—DISTANCE, 55 MILES.

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This line was built in 1885, from Jamestown to LaMoure, following closely the course of the river, and is operated by the Northern Pacific Company. It is now (1886) being extended southward to a connection with the Chicago, Milwaukee & St. Paul and the North-Western systems, thus affording a direct line of communication between the northern and southern portions of Dakota. The road traverses a rich agricultural country. The valley proper of the James river is a narrow one, the bottom lands having a width of from one to three miles to the rolling uplands on either side. It has a rich black loam soil, and, for general fertility, and adaptability to both small and large farming, is unsurpassed in Dakota.

The stations on the James River Valley Road are *Ypsilanti*, *Montpelier*, *Dickey* and *Grand Rapids*. The first three named are unimportant, save as wheat-shipping, country trade points. Grand Rapids has a population of about 300. For a description of LaMoure, the present terminus of the road, see the account of the Fargo & Southwestern Railroad.

## JAMES RIVER VALLEY RAILROAD.

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FROM JAMESTOWN TO OAKES.—DISTANCE, 69 MILES.

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This line begins at Jamestown and, following the course of the James river, runs southward to Oakes, where it connects with one of the lines of the Chicago & North-Western system, and also with the main line of the Minneapolis & Pacific Railroad. It furnishes the connecting link between the railroad systems of North and South Dakota. The road traverses a rich agricultural country. The valley proper of the James river is a narrow one, the bottom lands having a width of from one to three miles between the rolling uplands on either side. Occasional groves of cottonwood are found near the stream. The valley has a light black-loam soil, and for general fertility and adaptability to both small and large farming is unsurpassed in Dakota. The first stations on the road are *Ypsilanti*, *Montpelier*, *Adrian*, and *Dickey*.

**Grand Rapids** (41 miles from Jamestown) has a population of about 500, and is situated in the midst of fine farming country.

**La Moure**, county seat of La Moure county, and the junction of the Fargo & Southwestern Railroad, is described in the account of that road. A branch line runs from La Moure westward to Edgely, 20 miles. *Valley Junction* and *Glover* are small stations.

**Oakes**, in Dickey county (69 miles from Jamestown), is a



new town of rapid growth, the first buildings in which were erected in 1886. It has a population of about 1,000, a weekly newspaper, a large hotel, flouring mill, and two grain elevators. The Minneapolis & Pacific Railroad furnishes a short line to Minneapolis and St. Paul, and also extends into the country west of the James river. The Chicago & North-Western Railroad furnishes communication with all the towns in the Southern part of Dakota.



## DAKOTA DIVISION.—MAIN LINE.

[Continued from page 148.]

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**The Coteaux.**—The country between the valleys of the James and Missouri rivers, traversed by the Northern Pacific line, is a high, rolling plateau, the general elevation of which, above those two streams, is about 400 feet. This region is generally known as *The Coteaux*. Its correct geographical name, as given it by the early French settlers, was *Plateau du Coteau du Missouri*; but this has been shortened into *Coteaux*. The coteau country is open prairie, with an occasional small plat of timber on the shores of the lakes. It has no streams, the drainage all going into lakes and ponds. Most of the soil is deep and rich, and farming is successfully carried on. The region is also admirably adapted for stock-raising and wool-growing, pasturage being excellent, and the numerous natural meadows in the valleys and around the lakes and ponds furnishing an abundant supply of hay. From the western margin of the plateau, where it begins to dip toward the valley of the Missouri itself, the country is generally known as the Missouri Slope.

**Eldridge** (377 miles west of St. Paul; population, 100).—This village, which has only been settled a short time, contains a store, a church and school building combined, an hotel and an elevator of 10,000 bushels capacity. The products are wheat, oats, barley and potatoes. *Windsor* and *New Minneapolis* are small towns.

**Cleveland** (390 miles west of St. Paul ; population, 100) is surrounded by good agricultural and grazing lands. Farming was begun in 1883 upon the heretofore uninhabited prairie. The soil is eighteen to twenty-four inches deep, with a clay subsoil of eighteen feet. The town contains a depot, side track, postoffice, two stores, lumber yard and telegraph office. *Medina*, nine miles further west, is at present an unimportant station, much resorted to by sportsmen, who find good hunting and shooting in the vicinity.

**Crystal Springs** (407 miles west of St. Paul ; population, 100).—This is a small town, with excellent outlying agricultural lands; and good crops of wheat, corn, oats and potatoes are produced. The small lakes, not far distant, contain quantities of fish.

**Tappan** (415 miles west of St. Paul ; population, 115).—This is one of the handsomest small stations on the line of the railroad. It is situated on the Troy Farm, where about 2,500 acres are under cultivation. This farm was established in 1879, receiving its name in compliment to two of its owners, the station and postoffice being called Tappan in honor of a third proprietor. The farm consists of sixteen sections, or 10,240 acres, embracing most of the railroad land in two townships. Mr. Van Deusen, manager of the farm, states that his crop of wheat has been as high as twenty-five bushels to the acre, of oats sixty-five bushels, and barley thirty bushels. Mr. Van Deusen has been very successful in sheep-raising.

**Dawson** (420 miles west of St. Paul ; population, 400) is an enterprising town, having an excellent agricultural and stock-raising country tributary to it. It has three hotels, one of which cost \$15,000, several general stores, lumber yards, livery stables and a newspaper. The products are wheat, oats, barley and potatoes. About two miles south of the depot lies a beautiful body of fresh water, called Lake Isabel.

**Steele** (428 miles west of St. Paul ; population, 500) is a thriving town near the centre of Kidder county, of which it is the county seat. The place is a monument of the energy and perseverance of its founder, Mr. W. F. Steele, who has within three years transformed the prairie, 1,300 feet above the level of the sea, and the highest point on the line of the Northern Pacific between Duluth and Bismarck, into a town with a fast-growing population. Situated in a rich agricultural district, Steele is already a favorable trading point, containing general stores, a court house, two hotels, a newspaper, an elevator and lumber yards, a school and a church. Mr. Steele has at least 3,000 acres under cultivation. There are many small farms in the neighborhood of Steele, the owners of which are quite prosperous. The town is supplied with water from tanks inclosed in two brick towers, each forty feet high, the water being pumped from wells beneath the tanks by windmills. South of the town is Lake Etta, a considerable body of water, with timber on its shores. Lakes Isabella and Chattie are in the same vicinity. Twelve miles north of Steele is Horse Head Lake, a body of water.

*Geneva, Driscoll, Sterling, McKenzie, Menoken and Apple Creek*, situated on the line of the railroad, distant from St. Paul, respectively, 435, 439, 447, 453, 458 and 467 miles, are at present shipping and supply stations in the midst of a fine agricultural and grazing region. At each of these points there are one or more general supply stores, and the population and business interests are constantly increasing. Sterling has about 100 inhabitants, and Menoken is the distributing and shipping point for the large farms which surround it. Apple creek is a beautiful stream, offering fine sites along its banks for farm houses.

**Tree Planting.**—It has been fully demonstrated for a long time past that many forest trees will grow and thrive *under cultivation* upon the naked prairies and plains of the

Western States. The advantage of timber to the settler admits of no dispute. To encourage and stimulate the farmers of the Dakota plains to engage in tree planting has been one of the aims of the railroad company. To accomplish its purpose most effectively, it organized a tree planting department, and made a liberal appropriation to cover the expense of the work in 1880. Active operations were begun in the spring of 1882 at Tower City, Tappan and Steele. These points have distinctly defined and different characteristics of soil, and so are well suited to testing several varieties of trees. At Tappan, 200,000 trees and cuttings were planted, the same number at Steele, and also ten bushels of box elder seed, from which have sprouted about 300,000 thrifty shoots. At Tower City there were likewise planted 100,000 trees and cuttings. Only a small percentage of these trees have died, and the mass are in a vigorous condition. The varieties thus far planted are white willow, cottonwood and box elder; but the experience which has been gained, and additional knowledge of the soil and climate, justify the opinion that the list of forest trees available for planting can be enlarged so as to include the white maple and ash. The company has also broken about 600 different patches of ground along 200 cuts on the line of the railroad between Fargo and Bismarck, upon which trees have been planted to serve as wind breaks.

**Bismarck** (471 miles from St. Paul; population, 3,500).—This is the capital of Dakota, and the county seat of Burleigh county. The North Dakota Penitentiary is also located here. The geographical position of Bismarck is scarcely inferior to that of any city between the Atlantic and the Pacific Oceans. It is situated on the east branch of the Missouri river, which, with its tributaries, gives 2,000 miles of navigable water above it to the northward and westward, and about the same extent to the southeastward to St. Louis. Its landing is one of the finest on the great river, and the place has become, and will



always remain, the centre of steamboat navigation in the Northwest. The government has recognized its importance by making Bismarck a port of entry, with a deputy collector of U. S. Customs, and by locating here the U. S. Court, the U. S. Land Office, and U. S. Quartermaster's Depot, the Head quarters of the Northwest Division Military Telegraph Lines, and U. S. Signal Office, and the U. S. Marine Hospital. The Quartermaster's Depot is at Camp Hancock, where substantial buildings have been erected, and from this point all government supplies for military posts and Indian agencies are forwarded. Important mail routes centre here. The postoffice is second class, and is the pay office of railway postal clerks running between Bismarck and Glendive, Montana. Bismarck has two daily newspapers: the *Tribune*, a morning paper, was the first paper established in North Dakota; the *Blade-Journal*, an evening paper, is of later date; the *Anzeiger des Nordwestern* is a German weekly, also published at Bismarck.

The town is remarkable for its healthy situation, as it is for the productiveness of the land which environs it. Its elevation above the sea is 1,690 feet. It is above the line of possible submergence by the river, and is well adapted to easy and cheap drainage. In 1872 the engineers of the Northern Pacific decided upon crossing the Missouri river at this point, and this decision resulted in the survey of Edwinton and the first settlement of the city, the name of which was afterward changed to Bismarck by resolution of the Board of Directors of the railroad company.

The growth of Bismarck has been steady and substantial. The first attempt to open the agricultural lands of this county, except a few small patches of from two to ten acres, was made in 1878, and the first crop of wheat was grown in 1879. Corn, however, has been grown by the Indians for ages, probably, and improved varieties by the whites since the earliest occupation of the country.

The Catholics recently purchased "The Lamborn," a handsome brick building erected for hotel purposes, for a hospital. They have also schools which have been operated several years, and attract many pupils from abroad.

The public schools are all that could be desired. The high school building cost \$25,000, and there are two other school buildings,—one a brick, costing \$5,000, and the other a substantial frame. The court house is of brick, costing \$30,000. The city owns substantial buildings. There are three handsome brick bank buildings costing from \$30,000 to \$65,000 each, and many costly business houses and handsome residences.

The Episcopalians, Catholics, Methodists, Presbyterians, Baptists and Lutherans have erected church structures.

The Bismarck Roller Mills have a capacity of 250 barrels a day.

The Milwaukee Brewing Company expended over \$100,000 in permanent improvements.

Bismarck is an excellent starting point for parties in pursuit of antelope, deer, elk and feathered game, as outfits can be purchased at fair prices, and good guides secured for the country north of it.

Surrounding Bismarck are wide expanses of arable soil, capable of producing everything necessary to the subsistence of a large population. The river is skirted with timber, the belts ranging from a few rods to two miles in width. The timber is oak, ash, cottonwood, elm and box elder. Coal is abundant, and is sold in the city at \$3.50 per ton. The variety is lignite: one ton of it is regarded equal to about two cords of wood, which is sold at from \$5 to \$6 per cord; green cottonwood, at \$2.50 to \$3.50. Government land can still (1885) be entered within fifteen to twenty miles of the capital city. The country is particularly adapted to stock-growing, and large herds and sheep are being established. The staple products,

however, are wheat, oats, barley and flax. The wheat is always No. 1, unless the grade is lowered through fault in handling, and its weight is usually above the standard,—frequently 64 pounds to the bushel. Oats usually weigh 40 pounds to the bushel, 25 per cent. above the standard. The barley, flax and vegetables also show the superiority of soil and climate. The flint varieties of corn never fail to mature. The yellow dent is now being successfully raised. The grasses of the Missouri slope mature before frost, and, as there is no rain in winter, retain their nutriment, affording winter grazing. Provision for winter is not required, excepting during a few weeks, at most, of the severest weather.

**Fort Abraham Lincoln.**—An eminence of easy ascent, within the city limits of Bismarck, has received the name of Capitol Hill, and its summit is soon to be crowned with State buildings of imposing architecture. From this point a wide and beautiful view is obtained,—a prominent object in the scene being the white walls of Fort Abraham Lincoln. This military station lies five miles distant by the road, on the high bluffs on the west side of the Missouri, and not far from Mandan. It was attacked on five different occasions, during the years 1872-73, by the Sioux, with an aggregate loss of eight killed and twelve wounded on the side of the troops; but the repulsed Indians suffered more severely. The gallant and ill-fated Gen. Geo. A. Custer passed the last two years of his life at this post. One of the friends of the deceased General, in describing the incidents of Custer's busy life, gives a glimpse of his room at the old fort in the following words: "It was pervaded by an air of luxury and good taste, although the furniture was of the plainest, and much of it old and worn. But over every old chair or sofa, covering all deficiencies, were beautiful furs and skins that money could hardly purchase,—the spoils of Custer's rifle; and all around the walls hung grand heads of buffalo, of 'bighorn,' of graceful





antelope,—heads prepared by Custer himself, the fierce faces of wolf, bear or panther giving a wild and peculiar grace to the lofty room lit up by the glow from yonder ample fire-place, with its blazing logs."

**The Great Bridge Over the Missouri River.**—This superb bridge was opened for traffic with appropriate ceremonies on the 1st of October, 1882. Prior to that time the river was crossed by means of a large transfer steamer, specially constructed for the purpose of carrying trains of cars. Owing to the strong current and constantly shifting sand-bars in the channel, the ferriage by steamboat was always tedious, and the Northern Pacific Railroad Company never intended that so slow a transfer of its trains should be anything but a temporary arrangement.

The bridge proper consists of three through spans, each measuring 400 feet between centres of end pins, and two approach spans, each 113 feet. It is a high bridge, the bottom chord of the three main spans being placed fifty feet above the level of the highest summer flood, thus giving room for steamboats to pass at all navigable stages of the river, the bridge allowing practically four feet more room than many of the bridges on the lower Missouri. The variable channel and the high bluff on the east side were sufficient reasons for adopting the high bridge plan in preference to the low bridge with a draw, and the violent action of the ice added to the force of these reasons. The east end of the east approach span is supported by a small abutment of granite masonry founded on the natural ground of the bluff. The west end of the west approach span is upheld by an iron bent, resting on two Cushing cylinders, which are supported by piles driven into the sand-bar. The three long spans are supported on four granite piers, which are of unusual size, with long, raking ice breakers, shod with steel. They are fashioned so as to cut *readily the large sheets of ice upon the breaking up of the*



river in the spring, and to afford the least possible obstruction to the moving mass of broken ice which follows. Their stability far exceeds any force which the ice can exert.

Each of the main channel spans measures 400 feet, divided into sixteen panels of twenty-five feet each. The trusses are fifty feet deep from centre to centre, and twenty-two feet apart. The pedestals, end posts, top chords, and ten centre panels of the bottom chord, and all the pins and expansion rollers, are of steel. All other parts in the main are of wrought iron, except the ornamental work, which is of cast iron. Each long span contains 600,950 pounds of wrought iron, 348,797 pounds of steel, and 25,777 pounds of cast iron, the total weight of each span being 975,524 pounds. The steel used was manufactured under the most rigid inspection, and subjected to extraordinary tests before it was placed in position. The extreme height from the bottom of the deepest foundation to the top chord of the bridge is 170 feet. The floor of the structure is formed of oak timbers, nine inches square and fifteen feet long, with spaces of six inches between. On this floor are laid the steel rails of the track.

The east approach to the bridge leaves the old main line at Bismarck station, and is exactly two miles in length. The west approach is 6,000 feet long from the west end of the permanent bridge, with a descending grade westward of 52.8 feet per mile. One-fourth of this distance consists of a timber trestle, sixty feet at its maximum height, which is built across the space reclaimed from the river by the action of the dike. This trestle spans the place that was the main steamboat channel of 1880, which is already covered with a fair growth of willows. The bridge was subjected to a severe test on the day it was opened, each span bearing in succession the weight of eight heavy locomotives, or about 520 tons, and the maximum deflection under this enormous burden was not more than three inches.

**The Valley of the Upper Missouri.**—The fixing of the crossing point of the Northern Pacific Railroad over the Missouri at this place was no accident, but rather the natural result of adequate causes. Long before the remarkable expedition of Lewis and Clark up the Missouri to its source, over the Rocky Mountains, and down the Clark's Fork and Columbia rivers to the Pacific Ocean, nature had created and provided for the primitive people of this region a land admirably adapted to their condition and requirements. It was not "a land flowing with milk and honey," but a land abounding in beaver, buffalo and bear, where war and hunting were preferred to money, and life was passed without the white man's cares.

The land that subsisted the countless herds of buffalo, elk, deer, antelope and mountain sheep; that furnished the primitive people of Dakota with the amusement of the chase and the means of supporting a vigorous life,—was no "Great American Desert," except in the brains of ignorance, but was really one of the most productive areas of North America. Proof of this productiveness is found not only in the almost limitless prairie growth of sweet and nutritious herbs and grasses, but also in the forests of valuable timber that are found in every place where the streams or bluffs afford protection from the devastating annual prairie fires.

The region for a hundred miles above and below Bismarck and Mandan is blessed with an abundance of this kind of protection. The Big Heart and the Little Heart, on the west of the Missouri, empty their pure and constant waters into the great river very nearly opposite Bismarck,—the former just above Fort Abraham Lincoln, and the latter just below. On the east side of the Missouri, Apple and Burned creeks, streams of great length, purity and durability, flow into the great river just outside of the same town. In addition to these rivers, there are, to the west of the Missouri, the Cannon Ball, the Square

Butte, the Knife and the Little Missouri, and to the east the Turtle, the Long Lake, the Horse Head, and the Big and Little Beavers, all affording not only the finest arable and grazing lands, but, from their diffusion of an abundance of pure, fresh water, a protection from prairie fires to an immense tract of heavily timbered country. This timber, from primitive times up to the advent of civilization, gave adequate shelter, during the cold and inclement seasons, to the game that was reared and subsisted on the surrounding prairies, attracting the primitive inhabitants of this region as to a great centre abounding with the means of subsistence. Another peculiarity aided in fixing this point as one of great local interest to the nomadic aborigines. It is the narrowest point on the Missouri river for thousands of miles, and so offered the most feasible and expeditious crossing place for both Indians and the wild herds upon which they lived.

The copious spring and summer rains that contributed to the luxuriant growth of the prairie grasses for the subsistence of the buffalo, also made it possible to raise crops of maize, or Indian corn, which were cultivated extensively by the squaws on the rich, sandy alluvium of the Missouri bottoms. That the culture of this grain had been carried on by the aborigines from a very remote period, is shown by the fact that numerous fossilized and many charred corn cobs, in a perfect state of preservation, are still found in the excavated bluffs along the river, and very deep down in the oldest mounds.

Another marked peculiarity of the Missouri valley in and above the region about Bismarck, is its equable and agreeable winters. These result from the warm air which is brought by the westerly winds that prevail in this latitude from off the heated water of the great Japan Current, in the Pacific Ocean. The current of air passing eastward over the Northern Pacific Ocean, in its course onward across this part of the continent, finds comparatively little obstruction in the intervening mount-



ain ranges. These were so denuded during the glacial period of the vast quantity of material which was toppled over from their highest peaks, and deposited as rich surface soil upon this wheat-growing region, as to render them comparatively very low. The highest point of the Northern Pacific Railroad is less than 6,000 feet, and this is through and over an isolated range, while the Union Pacific Railroad is built for nearly 1,000 miles upon and over ranges of nearly 8,000 feet in height. This low elevation of the mountains on the line of the Northern Pacific allows the heated and saturated atmosphere to pass over with trifling obstruction, thus sensibly ameliorating the climate of Montana and Dakota.

These are a few of the reasons that formerly rendered the valley of the upper Missouri the "Paradise of Indians." That it was from time immemorial enjoyed as such is easily adduced from what is now known of it. The first recorded observation of it was made by Messrs. Lewis and Clark, who spent the first winter of their celebrated expedition over the Rocky Mountains, in the early part of Jefferson's administration, at Fort Clark, situated only a few miles above Bismarck. They gave a description of the country and its inhabitants which amply justifies all that is here said of it. The next known of the country was the result of army explorations, and the stories told by the old hunters and trappers of the Hudson's Bay and American Fur Companies. Then came the accounts of the few annual steamboat voyagers, to whom it was a region very partially explored, and who characterized it as a land of Indians, buffalo, elk, and all other kinds of game, with plenty of timber.

In 1863, after the Sioux had perpetrated their unparalleled massacre in Minnesota, Gen. Sibley drove them from that State, and followed them to their paradise of subsistence and safety in the neighborhood of the place where Bismarck now stands. Here the red men crossed the Missouri, and the

pursuit into the unknown land beyond was abandoned. This expedition, like almost every other against Indians, was a very hard one, and most of the volunteers from Minnesota remember the country only through their prejudices caused by the hardships of the campaign, which naturally resulted in giving it a bad name. This fact, however, did not deter the Northern Pacific Railroad Company from sending out experienced engineers to find and locate the most feasible route for the railroad, and to select the most practicable place for the construction of a bridge across the broad and swift Missouri river. The first efforts of these engineers were in pursuance of a suggestion made by Gen. I. I. Stevens, upon which they directed their explorations along a line passing a long distance north of the present crossing. When, however, the road, through legislation, had attained the importance which induced its friends to work earnestly for its completion, the engineers, in looking for the most direct and feasible route, encountered the Indian *travois* and buffalo trails leading to this Indian paradise. Following the footsteps of these experienced and successful guides, they followed as far as practicable these trails, and were thus directed to the best crossing place on the river.

The establishment of the crossing here led to the building of Bismarck and the settlement of the surrounding region. This resulted in so thorough an exploration as to furnish all the data necessary to establish the true, natural and inherent value of the country. Everywhere were seen the carcasses of buffalo slain by the Indians, and the ground was found literally cut up by the trails of these animals and the red men who hunted them, leading from all points of the compass on the east side of the river to the present site of Bismarck as a great converging place. All along the river banks, above and below, ancient as well as modern mounds were found, containing Indian skeletons, implements of war and the chase,



with specimens of pottery and other evidences of aboriginal ingenuity.

No wonder, therefore, that this region should be the red man's favorite resort, and that they lived here in large numbers. But the capability of the region to subsist men and animals is not only deducible from the footprints of the former inhabitants, but also from the gradual experience of the last five years, during which period the adaptability of the country to support a numerous and prosperous population has been fully demonstrated.



MISSOURI DIVISION.

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MANDAN TO GLENDIVE.—DISTANCE, 216 MILES.

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**Mandan** (199 miles west of Fargo, and 476 miles distant from St. Paul; population, over 3,000) lies on the western bank of the Missouri, nestled in the lowlands between that great stream and the Heart river, just after the railroad bridge is passed. The city is the county seat of Morton county. On three sides it is inclosed by low ranges of hills, and the fertile Heart river valley here broadens into a wide, circular plain. Up to 1879, when the extension of the railroad west of the Missouri river was begun, the site of Mandan was occupied by Indians, while buffaloes ranged on the neighboring hills. Even as late as the period named, the warlike Sioux had here a series of skirmishes, which culminated in a pitched battle with the Arickarees, or Rees, as they are commonly termed, a branch of the Mandan tribe. Under shelter of the bluffs, Mandan was founded in 1880. The streets are laid out in squares, the principal thoroughfare being Main Street, which runs parallel with the railroad, but is divided from the track along its entire length by a wide open space that is set apart for a city park. This being the terminus of the Dakota Division and the beginning of the Missouri Division of the railroad, there are, at Mandan, extensive machine shops, round-house, freight buildings, and every other appliance for the transaction of railroad business, a large number

of workmen being employed. There are three banks, one national and two private, several churches, schools, wholesale and retail stores, a flouring mill, one daily and two weekly newspapers, and a 200-barrel flouring mill.

In the vicinity of Mandan, an abundance of clay, suitable for manufacturing bricks of the very best quality, is obtained, and this industry is quite prosperous. Excellent stone, also found in the neighborhood, is largely used for the foundation of new buildings. Fuel is supplied in abundance—both wood and coal—by the timber which skirts the rivers, and by the mines, which are worked to great advantage, on the line of the railroad westward. The coal is delivered by the car load at the low rate of \$3.25 per ton. The outlying lands are very fertile, and large crops of wheat, corn, potatoes and other vegetables, are produced. Much attention is given in Morton county to stock and sheep raising, to which the country and climate are well adapted.

Mandan's merchants not only do a large business with the farmers who are fast settling in the fertile regions westward, but also send supplies by steamboat to the posts and settlements of the upper Missouri, the fine rock landing on the river at Mandan affording a peculiarly favorable point of shipment.

Mandan, lying as it does on the west bank of the Missouri river, controls most of the commercial business on the Northern Pacific between the Missouri and the Montana line. It is to the country lying west of it what Omaha is to the region lying west of the Missouri in Nebraska.

Near Mandan are points of interest dating from prehistoric times. A short distance south of the city are mounds which have been formed by successive layers of camp refuse, heaped together, and burned by recurring prairie fires. In these stratifications are found stone weapons, arrow-heads, household implements, pottery, trinkets, and bones of men and animals.



The Indians deny all knowledge of these mounds, the presence of which offers a fine field for archæological and ethnological research. The Mandan *Pioneer*, describing some of the discoveries, said:

“Two miles from Mandan, on the bluffs near the junction of the Heart and Missouri rivers, is an old cemetery of fully 100 acres in extent, filled with bones of a giant race. This vast city of the dead lies just east of the Fort Lincoln road. We have just spent a half-day in exploring this charnel house of a dead nation. The ground has the appearance of having been filled with trenches piled full of dead bodies, both man and beast, and covered with several feet of earth. In many places mounds from eight to ten feet high, and some of them 100 feet or more in length, have been thrown up, and are filled with bones, broken pottery, and vases of various bright-colored flints and agates. The pottery is of a dark material, beautifully decorated, delicate in finish, and as light as wood, showing the work of a people skilled in the arts, and possessed of a high state of civilization. Here is a grand field for the student, who will be richly repaid for his labors by excavating and tunneling in these catacombs of the dead. This has evidently been a grand battle field where thousands of men and horses have fallen. Nothing like a systematic or intelligent exploration has been made, as only little holes, two or three feet in depth, have been dug in some of the mounds; but many parts of the anatomy of man and beast, and beautiful specimens of broken pottery and other curiosities, have been found in these feeble efforts at excavation. Who are they, and from whence did they come, dying, and leaving only these crumbling bones and broken fragments of their works of art to mark the resting place of a dead nation? Five miles above Mandan, on the opposite side of the Missouri, is another vast cemetery, as yet unexplored.

“How long have these bones and remains laid in this cemetery? is a question which readily suggests itself. The fact that there are no existing tribes on the plains having any knowledge of pottery would indicate that the mounds had existed for a very long time. And yet there are found near the surface, and again down to a depth of nine, ten or fifteen feet,

well-preserved bones, which look as if they had not been buried more than five or ten years. Then, again, the fact must be borne in mind that there are no tribes existing that will own to any knowledge of these mounds. The Indians simply say they are spirit mounds, concerning which they know nothing. It seems strange that they should have been forgotten, even within a period of 100 or 200 years, since the Indians have very tenacious memories for traditional matters. The sexton of this cemetery appeared to have a very peculiar way of doing his work. It seems that human bodies were buried, then an accumulation of grass and brush was thrown over them and set on fire. This is proved by the fact that above the bodies will be found from two to three inches of ashes. Then it looks as if the living folks had remained in the vicinity long enough to cover the dead remains with broken pottery and bones of animals. The whole would then be covered with layers of rubbish, such as would be cleared away from the tents of the people as a sanitary precaution. Broken pottery, and fragments of bones and ashes in layers, go to make the funereal mounds complete.

"In the ashes are found charred corn-cobs, burned bones and charred meat. All the large bones that are found are broken, with the exception of the human bones. Judging from appearances, this was not only a great cemetery, but a great banqueting place also."

*Sunnyside* is a stock-yard station, three miles from Mandan, where cattle are taken from the cars for feeding.

**Marmot.**—After leaving Mandan, the railroad passes through the fertile valley of the Heart river, which tortuous stream it crosses at frequent intervals, before reaching Marmot, the next station, nine miles westward. Marmot is situated on a high plateau, near the confluence of the Heart and the Sweet-briar rivers. The station derives its name from the fact that a prairie dog village existed here before the railroad appeared. As the train advances westward, these curious little animals are more abundant, their antics affording a great deal of amusement to passengers. Colonel Richard I. Dodge, in his book



"The Plains of the Great West," writes that "this well-known animal is badly named, having no more of the dog about him than an ordinary gray squirrel. He is a species of marmot, and burrows in the ground as do wolves, foxes, raccoons, skunks and all the smaller animals on the treeless plains. He lives on grass and roots, and is exceedingly prolific, each female bringing forth several sets of young each year. He is not excellent eating; but the young are as good as the common squirrel, and, when other flesh meat is not to be had, they make no unwelcome addition to the bill of fare. I regard the prairie dog as a machine designed by nature to convert grass into flesh, and thus furnish proper food to the carnivora of the plains, which would undoubtedly soon starve but for the presence in such numbers of this little animal. He is found in almost every section of the open prairie, though he prefers dry and arid to moist and rich localities. He requires no moisture and no variety of food. The scanty grass of the barest prairie appears to furnish all that is requisite for his comfortable existence. Though not in a strict sense gregarious, prairie dogs yet are fond of each other's company, and dig their holes in close vicinity. Such a collection is called a town, and they sometimes extend over immense areas. The numbers of inhabitants are incalculable. Cougars, panthers, wildcats, wolves, foxes, skunks and rattlesnakes all prey upon them without causing any perceptible diminution of their immense numbers." *Sweetbriar* is an unimportant station.

**New Salem** (504 miles west of St. Paul) is a prosperous agricultural community, largely composed of German Evangelical settlers. It has an hotel, two general stores, a lumber yard, livery stable, a weekly newspaper. A peculiarly fine agricultural country extends northward to the Knife river valley, 40 miles distant.

**Topographical.**—For 100 miles westward the physical appearance of the country is that of a roughly rolling prairie,

the fine agricultural possibilities of which have already been successfully tested. The railroad crosses at frequent intervals many water-courses, the more important of which, after leaving the Heart, are the Curlew and Knife rivers and Beaver creek. These streams are no puny rivulets, but dignified rivers of considerable volume, which, with their tributaries, meander in devious ways throughout the length and breadth of the land grant of the railroad, forty miles on either side of the track. Along these water-courses there is usually a fair supply of soft-wood timber, and the land is everywhere covered with a rich growth of buffalo and other nutritious grasses. The horizon is bounded on all sides by the undulating outline of the surface, varied occasionally by some dominating elevation which serves as a landmark. These sharp, conical elevations, denominated buttes,\* are very peculiar. They rise from the rolling plains, and, being usually without vegetation, show the sedimentary strata of the soil, which is often of many colors. All this region is at present thinly inhabited; but, as it is endowed with good water, an abundance of lignite coal, a rich soil, and a climate even somewhat milder than the country eastward, its advantages for settlement have been already recognized.

**Sedalia** (500 miles west of St. Paul).—This is a side track on the summit of the Sweetbriar.

**Blue Grass** (508 miles from St. Paul) is a section house and side-track station.

**Sims** (511 miles west of St. Paul; population, 250).—This place obtained its first start from the opening of a mine of lignite coal, worked to supply the railroad, and also for domestic fuel. The mine was first called *Baby Mine*, and latterly *Bly's Mine*; and, after the place had developed into a town of some importance, the name was changed to *Sims*, in honor of

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\* In pronouncing this word, the u is sounded as in tube.

**Geo. V. Sims**, then chief clerk in the Northern Pacific office in New York City. Sims is almost entirely built of an excellent quality of brick made in the place. Terra-cotta architectural ornaments are also made. The output of coal is over 250 tons per day. There are two veins four and one-half feet in thickness, and one of seven feet. The town has a large three-story brick hotel, a bank, newspaper, and a number of stores. The surrounding country is well adapted to general farming. *Almont*, *Curlew* and *Kurtz* are small stations, distant, respectively, 517, 522 and 529 miles from St. Paul.

**Glenullen** (534 miles west of St. Paul) is an agricultural settlement started in the spring of 1883 by a colony of farmers and mechanics from Ohio and Wisconsin. The present population of the village and tributary country is about 500. *Eagle's Nest* (539 miles west of St. Paul) is a water station.

**Hebron** (546 miles west of St. Paul) is a new settlement, composed in great part of colonists of the German Evangelical faith, from Illinois and Wisconsin. The road here crosses a branch of the Big Knife river, which makes a handsome and fertile valley.

*Antelope* is nine miles beyond Hebron, in the midst of a good farming country.

**Richardton** (561 miles west of St. Paul) was founded in the autumn of 1882, and named in honor of Mr. C. B. Richards, of the firm of C. B. Richards & Co., of New York, passenger agents of the Hamburg Steamship Line. The town is situated in Stark county, near Young Man's Butte, a prominent elevation not far from the railroad, and the promoters of the place have already succeeded in giving it importance. There are a number of stores, an hotel, a lumber yard and a brick yard. The surrounding country rolls in regular undulations through miles and miles of fertile soil, offering superior *advantages for farming*. The soil is a dark, rich and some-



what sandy loam of great depth, underlaid with a clay subsoil, and is well adapted to the cultivation of wheat, rye, oats and barley. To the north of Richardton, the country is somewhat broken, interspersed with well-watered valleys that afford abundance of wild hay. The small streams are generally fringed with a growth of cottonwood trees, thus making the region admirably suited to successful stock and sheep raising. Inexhaustible beds of coal, which may be inexpensively mined, underlie the whole region.

**Taylor** (567 miles west of St. Paul; population, 100).—The adjacent country was settled in 1882, mainly by people from New York and New Jersey. It has an hotel and two stores, and is surrounded by a wide expanse of fertile country. The soil is of vegetable mould, eighteen inches to three feet deep, with a fine subsoil similar to that of the James river valley. Four miles south of Taylor, flows the Heart river, while to the north is the Big Knife. Both these streams have broad, grassy valleys skirted with groves of oak, cottonwood and ash. Here, too, are found excellent cattle and sheep ranch sites. Many springs of good water issue from the outcropping beds of coal in the bluffs bordering the valleys, and wells give a good supply at a depth of sixteen to thirty-five feet. Besides the fuel which is furnished by the oak and cottonwood trees, the whole country is underlaid with a bed of good coal five feet in thickness, which can be mined by digging from three to fifteen feet deep. From this bed the settlers obtain their own fuel at leisure times, highly appreciating so great an advantage.

**Gladstone** (574 miles west of St. Paul; population, 300).—This town was laid out in the spring of 1882 by a colony from Ripon, Wisconsin, on the north bank of the Green river, and named in honor of the great English statesman. The situation of the town is pleasant, and the surrounding country for many miles is settled by the colonists. During the first year of the

colony's existence, about 150 families took up the lands in the neighborhood, and the crops raised upon the upturned sod were bountiful. Near Gladstone are great fields of coal of a good variety for heating and cooking purposes. This coal is apparently of a recent formation, and emits no smoke or disagreeable odor, but burns like wood and equally as fast. Gladstone has an hotel and a number of stores and shops.

**Dickinson** (586 miles west of St. Paul; population, 600) is an active new town in the valley of the Heart river, at the terminus of the first freight division of the Missouri Division. It lies in the midst of an agricultural and grazing country, and is already an important shipping point for cattle and grain. The ground on the outskirts of the town gradually slopes to the south, giving a fine opportunity for drainage. There are two good hotels, several stores, a flouring mill, commodious railroad shops, round-house, passenger depot and freight warehouse. Dickinson is the county seat of Stark county. The tributary country is well watered, and the rainfall in spring and summer is sufficient to ensure good crops. Many thousands of acres are already under cultivation, and there are excellent stock ranges within thirty miles of the town. The coal beds in the immediate vicinity produce a good quality of lignite, and a fine grade of clay for brick making and sandstone for building purposes is found in the neighboring bluffs. *Eland* and *South Heart* are unimportant stations.

**Belfield** (606 miles west of St. Paul) is situated in a region which is sometimes termed the "Summer Valley." The Heart river, here a pretty stream, is bordered on each shore with handsome trees. Hundreds of miles north and south of the new town stretches a very fine agricultural country, and its proximity to the well-sheltered valleys of the Bad Lands will make it a headquarters for cattle-raisers. Belfield contains a church, several general stores and lumber



yards. Water is found in abundance by digging wells at no great depth.

The next stations, *Fryburg*, *Sully Springs* and *Scoria*, are in the midst of scenes which are so unique as at once to fix attention.

**The Bad Lands.**—At Fryburg the train suddenly leaves the beautiful rolling prairies, and enters a long cut on a down grade, presently emerging upon a region, the startling appearance of which will keep the vision alert until the Little Missouri river is reached, fourteen miles beyond. Here are the Bad Lands, sometimes called Pyramid Park, which show that the mighty forces of water and fire, fiercely battling, have wrought a scene of strange confusion. Buttes, from 50 to 150 feet in height, with rounded summits and steep sides, variegated by broad horizontal bands of color, stand closely crowded together. The black and brown stripes are due to veins of impure lignites, from the burning of which are derived the shades of red, while the raw clay varies from a dazzling white to a dark gray. The mounds are in every conceivable form, and are composed of different varieties of argillaceous limestone, friable sandstone and lignite lying in successive strata. The coloring is very rich. Some of the buttes have bases of yellow, intermediate girdles of pure white, and tops of deepest red, while others are blue, brown and gray. There are also many of these elevations which, in the hazy distance, seem like ocean billows stiffened and at rest.

Between these curiously shaped and vari-colored mounds there are sharp ravines and gulches, which are often the beds of shallow streams. Here and there are broader spaces, covered with rich grass, and flecked with a growth of ground juniper of delicious fragrance. No trees worthy of the name are seen; but a fringe of gnarled and misshapen pines occasionally presents itself along the water channels. In ages



Buttes in Pyramid Park,

long ago, however, dense forests existed in these Bad Lands. There is evidence of this primeval growth in the abundant petrifications of tree stumps, four to eight feet in diameter, which are in portions translucent as rock crystals, and susceptible of as high a polish. Fine specimens of fossil leaves, of the Pliocene age, changed by the heat of the burning lignite into a brilliant scarlet, but retaining their reticulations perfect, are also found. The coal, still burning, gives a plutonic aspect to the whole region, one fiery mass not far from the railroad being easily mistaken at night for an active volcano, the cliffs having close resemblance to volcanic scoria. Among the many other fossil remains are oysters, clams and crustaceans. The seeker for geological curiosities has here a fine field in which to work.

The term Bad Lands, as applied to this region, is a gross misnomer. It conveys the idea that the tract is worthless for agricultural and stock-raising purposes. Nothing could be wider of the truth. The fact is, the soil possesses fertilizing properties in excess, and the luxuriant grasses which here flourish, attract herbivorous game animals in large numbers. The designation "Bad Lands" is derived from the times of the old French *voyageurs*, who, in their trapping and hunting expeditions in the service of the great fur companies, described the region as "*mauvaises terres pour traverser*," meaning that it was a difficult region to travel through with ponies and pack animals. This French descriptive term was carelessly translated and shortened into "bad lands," and thus has resulted a wholly false impression of the agricultural value of the country.

This entire region, geologists tell us, was once the bed of a great lake, on the bottom of which were deposited, for ages, the rich clays and loams which the rains carried down into its waters. This deposit of soil was arrested from time to time *sufficiently long* to allow the growth of luxuriant vegetation,



which subsequently decayed, and was consolidated by the pressure of succeeding deposits, transforming itself into those vast beds of lignite coal which abundantly meet the need of the country for fuel. The various strata thus deposited are all of recent origin, and, being without cementing ingredients, remain soft, and easily washed by the rains. When at last this vast lake found an outlet in the Missouri, the wear and wash of these strata, under the action of rain and frost, were very great. Hence the water-courses, especially the minor ones, where the wash has not had time enough to make broad valleys, have precipitous banks, and high inclosing bluffs, with curiously furrowed and corrugated sides, usually bare of vegetation, and showing only the naked edges of the rich soils of which they are composed. The tops of these bluffs and buttes are on the general level of the whole country, and are equally as fertile. This is shown by the hotel garden at the Little Missouri, where, in the very heart of the "Bad Lands," and on the summit of the highest bluff, a level spot was chosen and planted, which annually yields heavy crops of vegetables, the potatoes alone producing as many as 300 bushels to the acre. But these Bad Lands, misnamed as they are, form a very small part of the country,—they are conspicuous from the fact that the chaos of buttes is so curious and fantastic in form and beautiful in varied color. From the railroad, which naturally follows the valleys between these strangely formed, isolated mounds and hills, the view of the broad, open country which lies on a level with their tops, is shut off.

Henry J. Winsor, writing from the Bad Lands in 1882, noted his observations in an Eastern journal as follows:

"My visit to the Bad Lands,—which, by the by, are beginning now to be known as Pyramid Park,—proved to me how erroneous had been my own impressions with respect to them. I found excellent grazing in all the tortuous valleys and frequent glens; while the tops of the giant buttes—

level as a floor in many cases, and containing hundreds of acres in a single plot—offer as fine agricultural lands as can be found.

“A party of six arrived late at night at the hostelry at Little Missouri Station, a rough but not uncomfortable refuge for tired and hungry wayfarers. After a good night's rest, we started next morning on a tour of exploration, guided by Moore, the inn-keeper, a jolly, fat and rosy-cheeked young man, brimming over with animal spirits. Two of the party preferred riding on a buckboard wagon; the others mounted hardy ‘cayuse’ ponies; and among the latter was a subject who weighed 250 pounds, his avoirdupois fully testing the wiry endurance of his steed, which showed no sign of flagging vigor after a long day's journey. Twice we forded the shallow stream, yellow as the Tiber. Rough riding here. If I were to tell of the slopes down which we slid, and up which we struggled, buckboard and all, I am sure I would jeopard my reputation for truth. The ride was quite exhilarating and altogether novel, nevertheless. A particular zest and flavor was given to the scenery by the remarkable grouping of fantastically shaped buttes, each girdled with a broad band of crimson,—a stratum of pure pottery, burned in Nature's oven by the combustion of the coal veins underlying the clay. These potsherds, jagged and shapeless, are used by the railroad instead of gravel for its roadbed, and answer the purpose admirably. The road here, therefore, may well be likened to a scarlet runner. After some hours of rough riding, we brought up at a sheep ranch, belonging to the Eaton brothers, where we were surprised by the many appliances for comfort *en garçon*. A tame antelope fawn, playful as a kitten, and a medley of buffalo heads, and elk and mountain sheep horns, as well as other trophies of the chase, diverted us; and stories were told of the large and small game which the neighborhood supplies to those who know how to shoot it, which would make even the least enthusiastic sportsman long to try his luck. A lavish game dinner, including tender buffalo steak, washed down with rich milk and good water, and a dessert of canned fruits, was just the thing to satisfy appetites made unusually keen by the brisk ride in the dry, pure air. These Eaton boys, whose hospitality we had so agreeably tested, are from the East, and they have money enough invested in sheep and





Pyramid Park Scenery.

cattle to carry on a very respectable wholesale business in any large city of the Union. Having enjoyed their hospitality as long as our time would admit, we left their 'shack,' which is the common name for a substantial log house, re-enforced by one of these happy ranchmen,—a young chap who sat his horse as though he were a centaur, and looked a picturesque and noble figure, with his clean shaven cheeks, heavy drooping mustache, sombrero, blue shirt and neckerchief with flaming ends; in fine, a perfect specimen of the noble manhood finish which this breezy, bounding Western life often gives in a few years to the Eastern born and bred young man. After visiting a coal vein which has been smoldering constantly ever since the country was known to the whites, and from time immemorial, according to Indian tradition, the fire of which is visible at night from the train, we inspected the 'Maiden of the Park,' the 'Watchdog,' and others of the buttes which bear more or less resemblance to the things after which their sponsors named them. We also chipped off specimens of petrified wood, full of sparkling, silicious crystals, from the mammoth tree trunks turned to stone, which crop out from the sides of the conglomerate mounds, showing that, in ages long remote, a stately forest grew on these grassy plains."

Prof. N. H. Winchell, of Minnesota, who accompanied Gen. Custer as geologist on his Black Hills expedition in the summer of 1874, thus describes the general formation of this region:

"Although I call these bad lands (for so they are generally known among the men who have before crossed here), they are not so *bad* as I had been led to expect from descriptions that I have read. There is no great difficulty in passing through them with a train. There are a great many bare clay and sand buttes, and deep, perpendicular cañons, cut by streams in rainy seasons; but there are also a great many level and grassy, sometimes beautiful, valleys, with occasionally a few trees and shrubs. There is but little water in here, the most that we have found being due to recent rains. The tops of a great many of the buttes are red, and often they are overstrewn with what appears like volcanic scoria. This, I am

satisfied, arises from the burning of the lignite, which occurs in nearly all these lands, there being one large bed of it, and sometimes two distinct beds, in the same slope. The lignite is ignited by fires that sometimes prevail over the plains, set by Indians, and, when fanned by the strong winds that sweep across them, produces a very intense heat, fusing the over and under lying beds, and mixing their materials in a confused slag, which, although generally of a reddish color, is sometimes of various colors. The clay makes a very hard, vitreous or pottery-like slag, that is sometimes green or brown. Iron stains the whole with some shade of red."

**Medora** (625 miles west of St. Paul; population, 300).—This town is situated on the east bank of the Little Missouri river, and is surrounded by high bluffs seamed by lignite and scoria, which is characteristic of Bad Lands scenery. It is the creation of the Marquis de Mores, a French gentleman, formerly an officer in the French army, who has built up at this point an extensive business in slaughtering cattle and sheep, and shipping dressed beef and mutton to Eastern markets. The Northern Pacific Refrigerator Car Co., of which he is President, has a large abattoir at Medora, with a capacity of handling 600 beeves a day. The carcasses are first placed in cooling-rooms, and thence transferred to refrigerator cars. The company owns cold storage houses at Helena, Jamestown, Fargo, Brainerd, Duluth, Minneapolis, St. Paul, Chicago and New York. The works at Medora cost about \$100,000. Medora has two hotels, several general stores, a newspaper, church and school. The town is a favorite stopping place for tourists on their way to the Pacific coast. The so-called burning mine, where the lignite seams are on fire beneath the surface of the ground, is seven miles distant over a good road.

**Cattle-raising in the Bad Lands.**—Hon. Theodore Roosevelt, of New York, who owns a cattle ranch near Medora,



in a recent article in the *Bismarck Tribune* wrote as follows on the subject of cattle-raising in the Bad Lands :

"Roughly speaking, the stretch of country known among cattle men as the 'Dakota Bad Lands,' occupies the western portion of the Territory, from the Black Hills region on the south to the Missouri on the north ; that is, it comprises the country drained by the Little Missouri river, and the waters running into it. This river runs in long loops, which inclose fertile bottoms, through a rather narrow valley, bounded on each side by a line of jagged buttes, back of which stretches a mass of very rough and broken hill country, rent and cleft in all directions by deep, winding ravines, and narrow, cañon-like valleys. Creeks open into the river every few miles. At certain seasons their beds hold foaming torrents, while during the rest of the year they are either perfectly dry or consist merely of strings of small, shallow pools, with here and there a deep spring hole. Some of the alluvial river bottoms are thickly timbered with cottonwood, and in a few of the ravines there is a growth of pine and cedar. The Bad Lands proper extend back for from five to twenty miles, when we come out on the level prairie, which gives the cattle fine feed in summer, but offers them no shelter whatever from the bitter winds of winter.

"It is less than three years since the first cattle were brought into this region. Now the herds of the stockmen graze fifty miles north, and many times that distance south, of the railroad. The cattle men through the Bad Lands have formed themselves into a stock association, and most of them, in addition, have joined the great Montana stock association. Their round-up takes in all the country along the Little Missouri, from Box Alder creek on the south to below the Big Beaver creek on the north, including the ranges of some fifteen or twenty stock outfits along a river front of nearly two hundred miles. Each such outfit may have from 500 to 10,000 head of stock, and from 10 to 100 head of ponies with which to herd them. There is plenty of timber for building purposes ; the home ranch of each outfit consists of a log house, or shack, containing one or many rooms, according to the way the inmates appreciate comfort and the *decencies of life* ; near by is a log stable and outbuildings, a

strong, high, circular horse corral, with a snubbing post in the centre, and further off the larger cow corral, in which the calves are branded, etc.

"The country is covered with a growth of short bunch grass, which cures on the stalk into excellent hay for winter feed; it is very nutritious, and upon it range cattle become as fat as stall-fed oxen. Over most of the land there is nothing but this grass, and the bitter, grayish green sage brush; except for a few weeks in spring, when the first growth forms a mantle of green, the whole land is colored a monotonous dull brown, which, joined to the extraordinary shape and bizarre coloring of the water-worn buttes, gives the landscape a look of grim and forbidding desolation, although this very look of loneliness, sameness and vastness, also gives it an intense attraction for some men, including myself. This forbidding aspect of the land, however, completely belies its real character; the dull, barren-looking country, clad with withered brown grass, in reality offers as fine grazing as can be found anywhere in the West, while the cliffs and broken valleys offer almost perfect shelter to the animals in the winter. The loss among cattle during the winter, no matter how severe the weather, is surprisingly small, always excepting, of course, half-starved "pilgrims," or cattle put on the range late in the fall, and in poor condition. The rainfall is slight, and the snow rarely covers the ground to any depth. The water supply back of the river is scanty, and the country is wholly unfit for agricultural purposes; recognizing which fact, the last Territorial legislature very wisely repealed the herd law, in so far as it affected the western tier of counties, and the cattle men are now free from the fear of being sued by every unscrupulous adventurer who palms himself off as a granger, and declines to fence in his few acres of grain or vegetables. The scantiness of the water supply is no harm to the cattle men, as in summer the beasts keep within a few miles of the river, principal creeks or large water-holes, and thus leave a great stretch of back country over which they have not grazed, and which affords them excellent winter feed when ice has closed up all the ponds and streams, and they are obliged to slake their thirst by eating snow.

"Each ranchman puts up a certain amount of hay for winter use for such horses as he constantly rides, to help out any



sick animals which he finds, etc. So far, all this hay has been wild, and has been cut on the tops of the great plateaus; but the time is rapidly approaching when the ranchmen will be obliged to fence in large patches of ground and raise a hay crop, by preference alfalfa, if on further trial it proves that it will grow.

"The excellence of the Bad Lands as a country for fattening steers has been proved beyond all doubt; as yet it is too early to say definitely how it will turn out as a region for raising stock. Last year the calf crop was very light; but it is believed that this was mainly due to the very insufficient number of bulls on the range, as a number of the outfits have yet to learn that it is criminal folly to expect to get along with the same proportionate quantity of bulls loose on the range as would do on an Eastern farm. There will always be a lack of calves until the supply of bulls is much more ample than at the present time. Still, appearances indicate a much larger calf crop this year than was the case last. Along the river, as a whole, the steers greatly outnumber the female stock. Horned cattle, and also horses, do excellently; but all efforts at sheep-raising have so far been flat failures,—for which the cattle men are sincerely grateful. The sheep have in each case died by the score and the hundred, but a small percentage surviving the first winter. Many of the ranchmen and small stock owners have now brought out their wives, and the country, which four years ago was an empty wilderness, or with straggling bands of Indians and parties of hunters, is now settled by a thriving and prosperous class of men, and in many spots a most pleasant home life is growing up. The ranchmen are hearty, open handed and hospitable. The cow boys are a fearless, generous, good-natured set of men, much misrepresented in some Eastern papers. Of course, there are fools in all classes, and the fool variety of cow boy likes to come into town and get drunk, and go about yelling and shooting in the air, firing at the car wheels of a passenger train, or perhaps shooting off the hat of some well-dressed stranger who looks small and timid. But, if a man keeps away from drinking saloons, does not put on airs, and, at the same time, shows that he does not intend to stand any nonsense, he can safely reckon upon first-class treatment in *cow boy land*."

**Little Missouri** (626 miles west of St. Paul) is a small village just across the river from Medora. It has an hotel and several stores. There is a coal mine on the bluffs close at hand. There is an abandoned military post a quarter of a mile from the place, the buildings of which are now occupied by people employed in the two neighboring towns.

Soon after leaving the Little Missouri river the country westward becomes less rough, although the railroad passes through many cuts and ravines. Gradually, however, the feature of the landscape is that of broad rolling prairie, marked here and there by isolated buttes. The last two stations on the railroad in Dakota are *Andrews* and *Sentinel Butte*, distant respectively 634 and 642 miles from St. Paul. These places are both unimportant.

**Sentinel Butte** is a prominent object on the left hand, not far from the track. The top of this eminence is visible on clear days at a distance of thirty miles, but looks only to be about three miles off, so deceptive is the luminous atmosphere. This region abounds in moss agates, specimens of which are found, near the foot of the buttes, of great size and beauty. A well-known army officer, who was at one time stationed here, secured a sufficient number of these agates so large that they were converted into dessert knife handles, and served as a unique and handsome present to a lady on her wedding day.

Sentinel Butte, in spite of its precipitous faces, as seen from the railroad, is easy of access on the side remotest from the track. On its summit there is half an acre of level ground. Buffalo were very partial to this elevation, and sometimes resorted to it in so large numbers that many were crowded over the brink. The bones of these animals lie in heaps at the foot of the precipice, whitened by the weather.

**A Primitive Boundary Mark.**—One mile west of Sentinel Butte the boundary between Dakota and Montana is

crossed. The line is marked by a tall pole, upon which is nailed a fine pair of antlers.

The railroad for the next thirty miles passes over a fine prairie plateau, which is watered by many small running streams. It then traverses six miles of broken country, which forms the divide between the Little Missouri and Yellowstone rivers, after which it descends into the valley of Glendive creek, and reaches the Yellowstone river at the town of Glendive, twelve miles beyond.



## MONTANA.

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Montana embraces nearly as large an area as Dakota. It averages 275 miles from north to south, and 550 miles from east to west, stretching through  $12^{\circ}$  of longitude, from  $104^{\circ}$  to  $116^{\circ}$  west of Greenwich, and lies for the most part between the forty-fifth and forty-ninth parallels of north latitude. Its southern boundary is in about the latitude of St. Paul, Minn., and its northern line joins the British Possessions. The mean height of Montana above the ocean level is estimated at 3,900 feet, the greatest elevation among the mountain peaks being 11,000 feet, and the lowest, on the Missouri river, being about 2,000 feet. Of the 93,000,000 acres contained within the limits of the Territory, two-fifths are mountainous, and three-fifths valleys or rolling plains. The water-shed between the Atlantic and the Pacific Oceans, the main chain of the Rocky Mountains, traverses the western portion of Montana in a course a little west of north, leaving about one-fourth of the entire Territory on the western slope and three-fourths on the eastern. In the central part of the Territory are the Bull, Belt, the Little Rocky and other smaller mountain ranges, which, with many lateral spurs and detached groups, give that great diversity of rocky ridges, broad plateaus and pleasant valleys, which render the country extremely picturesque.

Montana is well supplied with rivers. Her great water-courses are Clark's Fork of the Columbia and the Missouri river, the latter with many important tributaries. The Clark's Fork drains 40,000 miles of the Territory, and flows into the



Columbia river; while the Missouri and its tributaries, the Milk, the Yellowstone, the Teton, the Marias, the Judith, the Mussel-shell, the Jefferson, the Madison and the Gallatin carry off the waters of double that area. These rivers are navigated by steamboats a distance of 1,500 miles within the limits of the Territory. Montana is also supplied with a great number of beautiful lakes, the largest of which are Flathead, in Missoula county, ten by thirty miles in size, and Red Rock, in Madison county, twenty-five miles in length, and 6,500 feet above the sea-level. The great cataract of the Missouri river, thirty miles above Fort Benton, with a vertical fall of about eighty feet, is renowned for its grandeur.

The agricultural lands of Montana lie mainly in the valleys of the large rivers and their affluents. These valleys, usually old lake basins, which have received the wash from the surrounding mountains, have an alluvial soil which has proved to be very fertile. The land has generally a gentle and regular slope from the higher ground which separates the valleys from the foot-hills, and this is a fact of great importance in its bearing upon irrigation. So uniform is the slope that, in almost every instance, when water is conducted by means of a ditch from any stream, it may be made to flow over every foot of land in the valley below. The uplands (or bench lands, as they are commonly termed) are simply continuations of the valleys at a higher elevation. They frequently look like artificial terraces of enormous size, rising one above the other; and, where the quantity of water in the stream above admits the irrigation of the bench lands, they are also found to be very productive. Beyond these terraces are the foot-hills, with rounded tops and grassy slopes, and behind these loom up the mountains, crowned with a scanty growth of pine and fir, although the slopes and valleys are always destitute of these varieties of timber. There are no deciduous trees either, excepting groves of cottonwood and willows along the water-courses, and occa-



sional copses of quaking asp in wet places on the sides of the mountains. Only in the extreme northwestern part of the Territory is a very large body of magnificent timber, covering mountains and plains alike.

Eastern Montana, stretching from the base of the Rocky Mountains to the boundary of Dakota, and embracing an area of 90,000 square miles, is divided into three belts of nearly equal size by the Missouri and Yellowstone rivers. On the west and south are mountains, timbered with pine and fir, and from them issue many streams, which abundantly water the country. The ground is covered with a rich growth of bunch grass, which makes the region an excellent stock range. But the large area of grassy, rolling table lands in the northeastern part of the Territory is pre-eminently the place for cattle-raising and sheep husbandry; Meagher county especially, in which lie the Musselshell, the Judith and the Smith rivers, being famed as the great grazing county of Montana.

The resources of the entire Territory are varied and very valuable. Millions of acres of good agricultural land are awaiting development; but, owing to the light rainfall, irrigation is generally necessary.

Mining has always been, and probably will continue to be, the leading industry. During the last twenty years the total output of the precious metals in Montana amounted in value to nearly \$200,000,000, and the present yearly product is over \$25,000,000.

**Historical.**—The history of Montana has not been destitute of stirring incident. Before 1861 there were no settlements, and the only whites who had visited the region were trappers, missionaries and the members of various military exploring parties. Public attention was first directed to the Territory at about the period named by the discovery of gold in paying quantities in Deer Lodge county. The report brought an irruption of miners from all the Western States,

among whom were some of the wildest and most reckless characters, whose names and misdeeds figure in the early annals of the Territory. In 1862 the rich placers at Bannack were discovered. In the following year a party, returning from an unsuccessful attempt to reach the Big Horn Mountains by way of the Gallatin river, whence they were driven back by the Crow Indians, camped for dinner on Alder creek, near the site of Virginia City. Here one of the number, William Fairweather by name, washed a few pans of gravel, and was surprised to obtain about \$2 worth of gold to the pan. The news soon spread, and numbers flocked to the place, which has since yielded \$60,000,000 of gold, half of which was taken out during the first three years after the discovery. The next important placer diggings were found in 1864, at Last Chance gulch, where Helena now stands, and at Silver Bow and German gulches, at the head of the Deer Lodge valley. Subsequently mines of great richness were found at various other points, and the excitement upon the subject ran high.

The fame of the diggings caused a large immigration, and, with the honest and deserving gold hunters, there was also a rush of the vilest desperadoes from the mining camps of the Western States and Territories. This ruffianly element served as a nucleus around which the evil-disposed gathered, and soon was organized a band of outlaws which became the terror of the country. These banditti included hotel-keepers, express agents, and other seemingly respectable people,—Henry Plummer, the Sheriff of the principal county, being their leader. The roads of the Territory were infested by the ruffians, and it was not only unsafe, but almost certain death, to travel with money in one's possession. One writer affirms that "the community was in a state of blockade. No one supposed to have money could get out of the Territory alive. It was *dangerous* to cope with the gang; for it was very large and

well organized, and so ramified throughout society that no one knew whether his neighbor was or was not a member." The usual arms of a "road agent," writes Prof. Dimsdale, in his history of "The Vigilantes of Montana," "were a pair of revolvers, a double-barreled shot-gun of large bore, with the barrels cut down short, and to this was invariably added a knife or dagger. Thus armed, mounted on fleet, well-trained horses, and disguised with blankets and masks, the robbers awaited their prey in ambush. When near enough, they sprang out on a keen run, with leveled shot-guns, and usually gave the word 'Halt! throw up your hands, you — — —!' If this latter command were not instantly obeyed, that was the last of the offender; but in case he complied, as was usual, one or two of the ruffians sat on their horses, covering the party with their guns, which were loaded with buckshot, and one, dismounting, disarmed the victims, and made them throw their purses on the grass. This being done, a search for concealed property followed, after which the robbers rode away, reported the capture, and divided the spoils."

At last the decent citizens organized a Vigilance Committee in self-defense. The confession of two of the gang put the lovers of law and order in possession of the names of the prominent ruffians, who were promptly arrested. Twenty-two of the miscreants were hanged at various places, after the form of a trial, between December 21st, 1863, and January 25th, 1864, five having been executed together in Virginia City. This summary justice so stunned the remainder of the band that they decamped. From the discovery of the bodies of the victims, the confessions of the murderers before execution, and from information sent to the Vigilance Committee, it was found that certainly 102 people had been killed by the bandits in various places, and it was believed that scores of unfortunates had been murdered and buried, whose remains were never discovered. It was known that the missing



persons had set out for various places with greater or less sums of money, and were never heard of again. After this wholesome justice had been meted to the murderers, law and order prevailed, the lawless element leaving the Territory, and the honest and enterprising remaining to develop the mining and other natural resources.

**Beach** (650 miles west of St. Paul).—This is the first station of the railroad in Montana. Beyond this fact the place is at present of no importance.

**McClellan** (659 miles west of St. Paul) is situated on Beaver creek, a clear stream running over a gravelly bottom, and promises to develop into a pleasant little town. The soil is rich, the water pure, and the point is a good one for cattle ranches.

**Hodges and Allard** are unimportant stations established on Glendive creek. The valley of Glendive creek is noted for its attractive scenery.

**The Yellowstone Valley.**—The railroad follows up the Yellowstone valley from Glendive to Livingston, a distance of 340 miles. In its characteristics the Yellowstone river more closely resembles the Ohio than any other American stream. Its waters, unlike those of the Missouri, are bright and clear, except when discolored by the freshets of its lower tributaries. The stream runs over a bed of gravel through permanent channels, and among thousands of beautiful islands, covered with heavy timber. It is navigable during a good stage of water for more than 250 miles, from its confluence with the Missouri at Fort Buford to a point above the mouth of the Big Horn river, by steamboats of two or three hundred tons.

The Yellowstone has many tributaries along that part of its course which is traversed by the railroad, especially on its south bank. After leaving Glendive, the first important stream coming in from the south is the Powder river, so called by *the Indians* from its inky-black water, stained by the long

course it runs through the alluvial soil flanking the Black Hills and Big Horn Mountains. Here the valley of the Yellowstone broadens, and the country behind the bluffs is better and richer than before. On the north side of the Yellowstone, between Powder and Tongue rivers, several small streams come in which drain the divide between the Yellowstone and the Missouri. The next river of consequence on the south side is the Tongue, with a good but narrow valley, already well settled by farmers and herders. About thirty miles westward of the Tongue another affluent of considerable volume is the Rosebud, flowing from the south. Fifty-six miles beyond is the Big Horn river, the largest tributary of the Yellowstone, draining the whole eastern slope of the Rocky Mountains from the Yellowstone southward to the Platte. The next important stream is the Clark's Fork of the Yellowstone, which must not be confused with the other and more important Clark's Fork of the Columbia.

The Yellowstone winds from side to side of the valley, and along most of its course westward presents a very picturesque appearance. Bluffs of what are called "Bad Lands" inclose it, showing their precipitous faces against the stream, first on one side and then on the other, as the river winds from bluff to bluff, leaving always opposite the bluffs a considerable valley on either side of the stream. The width of the Yellowstone valley throughout its entire length scarcely exceeds three miles; sometimes it narrows to not more than two miles, and again it widens to seven. At the heads of the lateral valleys are fine sites for stock ranches or grazing farms, the same luxuriant grasses covering the whole country. Clear, pure water is to be found every few miles in running streams and springs, along which are fringes of oak, ash, elm, box elder and cottonwood, with occasional pines and cedars in the ravines. Before reaching the Big Horn the valley becomes somewhat broader, and for many miles on the north side of



the river, beginning at a point opposite Fort Keogh, are ranges of bluffs which finally recede in height and gradually disappear. Along this part of the river the rough, broken water-shed of the Musselshell, the Missouri and the Yellowstone, called the Bull Mountains, is drained by three small streams, which have considerable valleys of fertile soil. The streams are Frozen creek and the Big and Little Porcupine. The Yellowstone above the Big Horn runs through a comparatively narrow valley, which broadens only at a single point. The Clark's Fork Bottom lies in this part of the valley, on the north side of the Yellowstone, extending from the rocky bluffs east of the old settlement at Coulson, near the site of Billings, to the hills which put into the river from outlying spurs of the Rocky Mountains, some thirty-five miles westward.

The traveler, passing through the Yellowstone valley, except during the months of May and June, when vegetation is vividly green, is apt to rebel against the withered look of the grass. Lowland and highland alike are clothed with a russet garment, which the heat of summer has spread over them. The mountains appear like colossal hay-mows with the lush growth of bunch grass surging up their slopes, cured as it stands by the sun into the best of hay, upon which herds fatten all the year round. The valley has the same sere tone, and the fringe of dark pines on the brow of the hills does not relieve, but only serves to emphasize, the prevailing tone of the landscape.



Eagle Butte, near Glendive, Montana.

## YELLOWSTONE DIVISION.

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GLENDIVE TO BILLINGS.—DISTANCE, 225 MILES.

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**Glendive** (692 miles from St. Paul; population, 1,500).—Glendive is the first place of any prominence in Montana that is reached by the railroad. It is the county seat of Dawson county, the largest county in Montana, and is the terminus of the Missouri Division and the beginning of the Yellowstone. The town is in latitude  $47^{\circ} 3' N.$ , and longitude  $104^{\circ} 45' W.$ , and lies 2,070 feet above the ocean level. Situated on the south bank of the Yellowstone, ninety miles from the junction of that stream with the Missouri, at Fort Buford, Dak., Glendive occupies a broad plain which slopes gently toward the river, and is sheltered by a range of curiously shaped clay buttes, distant about half a mile from the stream, and rising abruptly to a height of nearly 300 feet above its level. These buttes are not unlike those seen at the Bad Lands of the Little Missouri, only here the subterranean fires have not burned so fiercely as further east, and the river seems to have stopped the combustion, for across the water there is a large expanse of excellent soil. The site of the town was selected and laid out under the supervision of Gen. Lewis Merrill, U. S. A., who adopted the name of Glendive for his projected city, in remembrance of Sir George Gore, an eccentric Irish nobleman, who spent the winter of 1856 in hunting buffalo



in this vicinity, and who originally applied the designation to the creek.

Glendive was founded in 1881. It has several flourishing business houses, the necessary stores and shops, public buildings, banks, church organizations, two hotels, two weekly newspapers, a brick court house costing \$25,000, and a fine brick school building costing \$10,000. The soil in the neighborhood is a rich, sandy loam, and the gardens of the inhabitants yield fine vegetables. The valley produces wheat, barley, corn, rye, oats and other crops. Wherever the land has been broken, young trees have appeared spontaneously, and good water is obtained by digging wells to a depth of from twenty to thirty feet. The place is an important point of shipment to Eastern markets of cattle and sheep, and, as it lies in the midst of an extensive grazing region, the stock interests will always be the most prominent.

The railroad company has built repair shops, round-houses, a station and freight buildings at Glendive, the brick used in the construction of which was manufactured in the town.

This is an advantageous place for securing hunting outfits, ponies being comparatively cheap, and provisions moderate. Game, usually abundant, embraces buffalo, elk, deer, antelope, bear, mountain sheep, timber and prairie wolves, jack rabbits and many varieties of birds. A tri-weekly line of stages runs between Glendive and Fort Buford, and also to Poplar Creek Indian Agency, on the Missouri river, ninety miles to the north.

The scenery just beyond Glendive is imposing. The railroad skirts the river, and bluffs tower several hundred feet above the track. *Eagle Cliff* is especially noticeable for its height, and the heavy engineering work which was necessary in constructing the railroad at this point.

At several stations between Glendive and Miles City an

opportunity is afforded for passengers to see during the summer months stacks of thousands of buffalo hides, which the buffalo slaughterers have brought in from the ranges for shipment to market. Glendive claims to have the largest tributary stock country of any town in Montana. The ranges from which the town draws its trade extend northward to the great Indian reservation west of the Missouri, and southward to the Wyoming line east of the Bad Lands of Dakota.

**Iron Bluff** (702 miles from St. Paul).—This is the first station on the Yellowstone Division of the Northern Pacific Railroad. Large quantities of shell boulders are found in the vicinity. These consist chiefly of shells, which are mixed with small quantities of silica and alumina. The analysis shows seventy per cent. carbonate of lime, thirteen per cent. carbonate of magnesia, the remaining portion being silica, alumina and phosphate of lime. This shell conglomerate has been thoroughly experimented upon by Captain Maguire, of the United States Engineer Corps, who finds that it produces an excellent water lime, about equal in strength and quality to Louisville cement. There is a plentiful supply of this material in sight; but the extent of the deposit is not known.

**Milton** (706 miles from St. Paul) is a small station with a section house for the railroad men.

**Fallon** (721 miles from St. Paul; population, 75) is at the mouth of O'Fallon creek. It is the depot for the beautiful and fertile valley running 100 miles south, which has attracted many ranchmen and stock-raisers.

**Terry** (731 miles from St. Paul; population, 75).—A small place, named in honor of Brig.-Gen. Alfred H. Terry, United States army. *Morgan*, ten miles beyond, is an unimportant station.

**Ainslie** (751 miles from St. Paul; population, 100) is the



depot for the Powder river valley region. Ten miles east of Ainslie, at the Powder river crossing, was fought a battle between the Indians and United States troops; and for several miles along the banks of the Yellowstone, the graves of the soldiers who died of their wounds on their march up the river can be seen. *Dixon*, ten miles further westward, is a new station, surrounded by a good country.

**Miles City** (770 miles from St. Paul) is the only town on the Northern Pacific line between Superior and the Rocky Mountains which did not owe its origin to the building of the road. It was a flourishing frontier trading post three years before the Northern Pacific reached the Yellowstone valley. Its business was originally, to a large extent, with buffalo hunters; but, after the extermination of the buffalo, the immense grazing country surrounding it was rapidly occupied by stockmen. There are now (1885) over 700,000 cattle on the ranges tributary to the town. These cattle were, to a great extent, brought in by rail from Iowa, Minnesota and other States; but many were driven from the older Wyoming ranges, and many from Texas. Miles City is the county seat of Custer county; it has a handsome court house which cost \$25,000, a large public school building costing \$15,000, two banks, three hotels, a daily newspaper with a weekly edition, a stock-grower's journal, five churches, two public halls, two saw mills, a brewery, and a large number of stores in all branches of trade. A weekly stage runs to Deadwood, Dakota. The Yellowstone is navigable to this point during what is called the "June rise;" but steamboating has been entirely supplanted by the railroad.

Miles City has suffered from numerous fires; but the frame buildings destroyed have been rebuilt with substantial brick structures, so that the business part of the town presents a very solid appearance. An irrigating ditch has been constructed from a point twelve miles up the Tongue river, to

supply water to a large area of fertile bottom lands. Some farming is carried on without irrigation on the bottoms close to the Yellowstone and Tongue rivers.

**Explorations of the Yellowstone.**—The first recorded exploration of the Yellowstone valley was that made by Captain William Clark, U. S. A., who was associated with Captain Meriwether Lewis, U. S. A., in the command of the famous Lewis and Clark expedition, fitted out in 1804, under authority of President Jefferson, to explore the region west of the Mississippi river, and extending to the Pacific coast. This vast territory, known as "the Louisiana purchase," and subsequently as the Province of Louisiana, was ceded to the United States by Napoleon Bonaparte, in 1803, for the nominal sum of \$15,000,000. The heroic band of explorers, numbering only thirty-two men, set out from St. Louis on the 14th of May, 1804, ascended the Missouri river a distance of 2,858 miles from its mouth, and, striking across the Rocky Mountains and other ranges westward, reached the mouth of the Columbia river on the 7th of November, 1805. On the 23d of March, in the following year, the dauntless explorers entered upon their return journey, recrossing the Rocky Mountains on the 3d of July. The expedition now resolved itself into three parties, one of which followed the eastern base of the mountains northward to the mouth of the Marias river, where it united with the second party, commanded by Captain Lewis, that had gone directly down the Missouri. The third detachment, under Captain Clark, pushed eastward until it struck the Yellowstone river, and then followed this stream 400 miles to its confluence with the Missouri, near which point the three parties again united. After an absence of nearly two years and a half, the expedition arrived at St. Louis on the 23d of September, 1806, having lost only a single man by death. This was one of the most brilliant and successful explorations ever made. By its means a mass of accurate information respecting the country

was gathered, the practical value of which has continued to the present day. The result of the expedition was at once to open up the newly acquired territory to the enterprise of the great fur companies, who established trading posts with the Indians at many points. Aside from the trappers, however, no whites settled in Montana until the breaking out of the gold excitement in 1862. Then, and even for many years afterward, the settlements were confined to the extreme western portions of the Territory, which were the most accessible, the eastern half long remaining a wilderness, in absolute possession of the Indians.

Only since the year 1853, at which time the government sent out an expedition, under command of the late General I. I. Stevens, to explore the region lying between the forty-seventh and forty-ninth parallels, with a view of reporting upon the feasibility of the northern route for a railroad from Lake Superior to Puget Sound, has the Yellowstone valley been brought to public attention. Since the date named a number of expeditions, both government and private, have passed through the valley from time to time, and their records of experience and adventure are of the highest interest. But it is not within the plan of this book even to outline the more important features of any of these exploring expeditions. The space at command will only admit of the narration of a few of the more important facts connected with the various conflicts between the Indians and the United States troops, of which this valley was the scene between the years 1873 and 1877.

During the period in question the aborigines strove hard to keep possession of their favorite country. But civilization, repeating the history which has marked its progress in every land, was not to be kept back, and the fierce struggle for supremacy between the white race and the red man resulted in the final disappearance of the latter from the Yellowstone valley.



The railroad was finished to the Missouri river toward the close of 1872; but the actual surveys and locations for the roadway had been made as far west as the Powder river, 250 miles beyond. An escort of troops always accompanied the surveying parties, and minor engagements between these small detachments and the Indians were of common occurrence. During 1873 these attacks became so bold and frequent that it was necessary to transfer an additional regiment of cavalry from the Military Department of the South for the purpose of holding the hostile red men in check, and a supply depot was established on Glendive creek, where that stream empties into the Yellowstone.

**A Fight with Indians at Tongue River.**—In the summer of 1873 an army expedition, consisting of about 1,700 men, under the command of Major General D. S. Stanley, was sent out from Fort Rice, on the Missouri river, to explore the Yellowstone valley in the interest of the railroad. In due time the expedition reached the Yellowstone river, and marched for several days up that stream. The country eventually proved so rough and broken that in many places serious delays were encountered in finding a practicable route for the long and heavily laden wagon trains. These serious embarrassments were only overcome by sending out each morning, some distance in advance of the main column, two companies of the Seventh Cavalry, under command of the late Gen. Custer, whose duty it was to seek and prepare a practicable road. In carrying out the plan, which already had been for some days followed successfully, Gen. Custer left camp at five o'clock on the morning of the 4th of August, with a force of ninety-one men, guided by Bloody Knife, a young Arickaree warrior. Presently the watchful eyes of the scout discovered fresh signs of Indians. Halting long enough to inspect the trail and gather all the information possible, it was clear that a party of Indians had been prowling about the camp the previous

night, and had gone away, traveling in the same direction as the detachment was marching. The discovery occasioned no surprise, as the presence of Indians had been expected for some days, and no change was made in the plan of the march, the hostile party numbering only nineteen, and the detachment over ninety. But the thrilling episode which followed should be given in Gen. Custer's own words, who himself graphically described it as follows :

"About ten o'clock we reached the crest of the high line of bluffs bordering the Yellowstone valley, from which we obtained a fine view of the river and valley extending above and beyond us as far as the eye could reach. After halting long enough to take in the pleasure of the scene, and admire the beautiful valley, spread out like an exquisite carpet at our feet, we descended, and directed our horses' heads toward a particularly attractive and inviting cluster of shade trees standing on the river bank, and distant from the crest of the bluffs nearly two miles. First allowing our thirsty horses to drink from the clear, crystal water of the Yellowstone, which ran murmuring by in its long, tortuous course to the Missouri, we then picketed them out to graze. Precautionary and necessary measures having been attended to, looking to the security of our horses, the next and equally necessary step was to post half a dozen pickets on the open plain beyond, to give timely warning in the event of the approach of hostile Indians. This being done, the remainder of our party busied themselves in arranging each for his individual comfort, disposing themselves on the grass beneath the shade of the wide-spreading branches of the cottonwoods that grew close to the river bank. For myself, so oblivious was I to the prospect of immediate danger, that, after selecting a most inviting spot for my noonday nap, and arranging my saddle and buckskin coat in the form of a comfortable pillow, I removed my boots, untied my cravat, and opened my collar preparatory to enjoying to the fullest extent the delight of the outdoor siesta. I did not omit, however, to place my trusty Remington rifle within easy grasp,—more from habit, it must be confessed, than from any sense of danger. Near me, and stretched on the ground, sheltered by the shade of the same tree, was my brother, the Colonel, divested of his



hat, coat and boots; while close at hand, wrapped in deep slumber, lay the other three officers, Moylan, Calhoun and Varnum. Sleep had taken possession of us all,—officers and men,—excepting, of course, the watchful pickets, into whose keeping the safety, the lives, of our little detachment, were for the time entrusted. How long we slept I scarcely know,—perhaps an hour,—when the cry of ‘Indians! Indians!’ quickly followed by the sharp, ringing crack of the pickets’ carbines, aroused and brought us—officers, men and horses—to our feet. There was neither time nor occasion for questions to be asked or answered. Catching up my rifle, and without waiting to don hat or boots, I glanced through the grove of trees to the open plain or valley beyond, and saw a small party of Indians bearing down toward us as fast as their ponies could carry them.

“‘Run to your horses, men! Run to your horses!’ I fairly yelled, as I saw that the first move of the Indians was intended to stampede our animals, and leave us to be attended to afterward. At the same time the pickets opened fire upon our disturbers, who had already emptied their rifles at us, as they advanced, as if boldly intending to ride us down. As yet we could see but half a dozen warriors; but those who were familiar with Indian stratagems knew full well that so small a party of savages, unsupported, would not venture to disturb, in open day, a force the size of ours. Quicker than I could pen this description, each trooper, with rifle in hand, rushed to secure his horse; and men and horses were soon withdrawn from the open plain, and concealed behind the clump of trees, beneath whose shade we were but a few moments before quietly sleeping. The firing of the pickets, the latter having been re-enforced by a score of their comrades, checked the advance of the Indians, and enabled us to saddle our horses, and be prepared for whatever might be in store for us.

“A few moments found us in our saddles and sallying forth from the timber to try conclusions with the daring intruders. We could only see half a dozen Sioux warriors galloping up and down our front, boldly challenging us by their manner to attempt their capture or death. Of course, it was an easy matter to drive them away; but, as we advanced, it became noticeable that they retired, and, when we halted or diminished *our speed*, they did likewise. It was apparent from the first





that the Indians were resorting to stratagem to accomplish that which they could not do by an open, direct attack. Taking twenty troopers with me, headed by Captains Custer and Calhoun, and directing Moylan to keep within supporting distance with the remainder, I followed the retreating Sioux up the valley, but with no prospect of overtaking them, as they were mounted upon the fleetest of ponies. Thinking to tempt them within our grasp, I, being mounted on a Kentucky thoroughbred, in whose speed and endurance I had confidence, directed Captain Custer to allow me to approach the Indians, accompanied only by my orderly, who was also well mounted, at the same time to follow us cautiously at a distance of a couple of hundred yards. The wily redskins were not to be caught by any such artifice. They were perfectly willing that my orderly and myself should approach them; but at the same time they carefully watched the advance of the cavalry following me, and permitted no advantage. We had by this time almost arrived abreast of an immense tract of timber growing in the valley, and extending to the water's edge, but distant from our resting place, from which we had been so rudely aroused, about two miles.

"The route taken by the Indians, and which they evidently intended us to follow, led past this timber, but not through it. When we had arrived almost opposite the nearest point, I signaled to the cavalry to halt, which was no sooner done than the Indians also came to a halt. I then made the sign to the latter for a parley, which was done simply by riding my horse in a circle. To this the savages only responded by looking on in silence for a few moments, then turning their ponies and moving off slowly, as if to say, 'Catch us if you can.' My suspicions were more than ever aroused, and I sent my orderly back to tell Captain Custer to keep a sharp eye upon the heavy bushes on our left, and scarcely 300 yards distant from where I sat on my horse. The orderly had delivered his message, and had almost rejoined me, when, judging from our halt that we intended to pursue no further, the real design and purpose of the savages were made evident. The small party in front had faced toward us, and were advancing as if to attack. I could scarcely credit the evidence of my eyes; but *my astonishment* had only begun when, turning to the wood on *my left, I beheld*, bursting from their concealment, between 300

and 400 Sioux warriors, mounted and caparisoned with all the flaming adornments of paint and feathers which go to make up the Indian war costume. When I first obtained a glimpse of them,—and a single glance was sufficient,—they were dashing from the timber at full speed, yelling and whooping as only Indians can. At the same time they moved in perfect line, and with as seeming good order and alignment as the best-drilled cavalry.

“To understand our relative positions, the reader has only to imagine a triangle whose sides are almost equal, their length in this particular instance being from 300 to 400 yards, the three angles being occupied by Captain Custer and his detachment, the Indians and myself. Whatever advantage there was in length of sides fell to my lot, and I lost no time in availing myself of it. Wheeling my horse suddenly around, and driving the spurs into his sides, I rode as only a man rides whose life is the prize, to reach Captain Custer and his men, not only in advance of the Indians, but before any of them could cut me off.

“Moylan, with his reserve, was still too far in the rear to render their assistance available in repelling the shock of the Indians’ first attack. Realizing the great superiority of our enemies, not only in numbers, but in their ability to handle their arms and horses in a fight, and fearing they might dash through and disperse Captain Custer’s small party of twenty men, and, having once broken the formation of the latter, dispatch them in detail, I shouted, at almost each bound of my horse: ‘Dismount your men! Dismount your men!’ but the distance which separated us, and the excitement of the occasion, prevented Captain Custer from hearing me. Fortunately, however, this was not the first time he had been called upon to contend against the sudden and unforeseen onslaught of savages; and, although failing to hear my suggestion, he realized instantly that the safety of his little band of troopers depended upon the adoption of prompt means of defense.

“Scarcely had the long line of splendidly mounted warriors rushed from their hiding place before Captain Custer’s voice rang out sharp and clear: ‘Prepare to fight on foot!’ This order required three out of four troopers to leap from their saddles and take position on the ground, where, by more



deliberate aim, and being freed from the management of their horses, a more effective resistance could be opposed to the rapidly approaching warriors. The fourth trooper in each group of 'fours' remained on his horse, holding the reins of the horses of his three comrades.

"Quicker than words can describe, the fifteen cavalrymen, now on foot and acting as infantry, rushed forward a few paces in advance of the horses, deployed into open order, and, dropping on one or both knees in the low grass, waited with loaded carbines—with finger gently pressing the trigger—the approach of the Sioux, who rode boldly down as if apparently unconscious that the small group of troopers were on their front. 'Don't fire, men, till I give the word, and, when you do fire, aim low,' was the quiet injunction given his men by their young commander, as he sat on his horse intently watching the advancing foe.

"Swiftly over the grassy plain leaped my noble steed, each bound bearing me nearer to both friends and foes. Had the race been confined to the Indians and myself, the closeness of the result would have satisfied an admirer even of the Derby. Nearer and nearer our paths approached each other, making it appear almost as if I were one of the line of warriors, as the latter bore down to accomplish the destruction of the little group of troopers in front. Swifter seem to fly our mettled steeds, the one to save, the other to destroy, until the common goal has almost been reached,—a few more bounds, and friends and foes will be united, forming one contending mass.

"The victory was almost within the grasp of the redskins. It seemed that but a moment more and they would be trampling the kneeling troopers beneath the feet of their fleet-limbed ponies, when, 'Now, men, let them have it!' was the signal for a well-directed volley, as fifteen cavalry carbines poured their contents into the ranks of the shrieking savages. Before the latter could recover from the surprise and confusion which followed, the carbines (thanks to the invention of breech-loaders) were almost instantly loaded, and a second carefully aimed discharge went whistling on its deadly errand. Several warriors were seen to reel in their saddles, and were only saved from falling by the quickly extended arms of their fellows. Ponies were tumbled over like butchered bullocks, their riders glad to

find themselves escaping with less serious injuries. The effect of the rapid firing of the troopers, and the firm, determined stand, showing that they thought neither of flight nor surrender, was to compel the savages first to slacken their speed, then to lose their daring and confidence in their ability to trample down the little group of defenders in the front. Death to many of their number stared them in the face. Besides, if the small party of troopers in the front was able to oppose such plucky and destructive resistance to their attacks, what might not be expected should the main party under Moylan, now swiftly approaching to the rescue, also take part in the struggle? But more quickly than my sluggish pen has been able to record the description of the scene, the battle line of the warriors exhibited signs of faltering, which soon degenerated into an absolute repulse. In a moment their attack was transformed into flight, in which each seemed only anxious to secure his individual safety. A triumphant cheer from the cavalymen, as they sent a third installment of leaden messengers whistling about the ears of the fleeing redskins, served to spur both pony and rider to their utmost speed. Moylan by this time had reached the ground, and had united the entire force. The Indians, in the meantime, had plunged out of sight into the recesses of the jungle from which they first made their attack. We knew too well that their absence would be brief, and that they would resume the attack, but not in the manner of the first.

"We had inflicted no little loss upon them,—dead and wounded ponies could be seen on the ground passed over by the Indians. The latter would not be satisfied without determined efforts to get revenge. Of this we were well aware.

"A moment's hurried consultation between the officers and myself, and we decided that, as we would be forced to act entirely upon the defensive against a vastly superior force, it would be better if we relieved ourselves, as far as possible, of the care of our horses, and take our chances in the fight which was yet to come, on foot. At the same time, we were then so far out on the open plain, and from the river bank, that the Indians could surround us. We must get nearer to the river, conceal our horses or shelter them from fire, then, with every available man, form a line or semicircle, with our backs to the



river, and defend ourselves till the arrival of the main body of the expedition, an event we could not expect for several hours. As if divining our intentions, and desiring to prevent their execution, the Indians now began their demonstrations looking to a renewal of the fight.

"Of course, it was easy to see what had been the original plan by which the Indians hoped to kill or capture our entire party. Stratagem was to play a prominent part in the quarrel. The few young warriors first sent to arouse us from our mid-day slumber came as a decoy to tempt us to pursue them beyond the ambush in which lay concealed the main body of the savages; the latter were to dash from their hiding place, intercept our retreat, and dispose of us after the most approved manner of barbarous warfare.

"The next move on our part was to fight our way back to the little clump of trees from which we had been so rudely startled. To do this, Captain Moylan, having united his force to that of Captain Custer, gave the order: 'Prepare to fight on foot!' This was quickly obeyed. Three-fourths of the fighting force were now on foot, armed with the carbines only. These were deployed in somewhat of a circular skirmish line, of which the horses formed the centre, the circle having a diameter of several hundred yards. In this order we made our way back to the timber, the Indians whooping, yelling and firing their rifles as they dashed madly by on their fleet war ponies. That the fire of their rifles should be effective under these circumstances could scarcely be expected. Neither could the most careful aim of the cavalymen produce much better results. It forced the savages to keep at a respectful distance, however, and enabled us to make our retrograde movement. A few of our horses were shot by the Indians in this retrograde skirmish; none fatally, however. As we were falling back, contesting each foot of ground passed over, I heard a sudden, sharp cry of pain from one of the men in charge of the horses; the next moment I saw his arm hanging helplessly at his side, while a crimson current, flowing near his shoulder, told that the aim of the Indians had not been entirely in vain. The gallant fellow kept his seat in his saddle, however, and conducted the horses under his charge safely with the rest to the timber. Once concealed by the trees, and no longer requiring *the horses to be moved*, the number of horse holders was

reduced, so as to allow but one trooper to eight horses, the entire remainder being required on the skirmish line. The redskins had followed us closely, step by step, to the timber, tempted in part by their great desire to obtain possession of our horses. If successful in this, they believed, no doubt, that, fight on our part being no longer possible, we must be either killed or captured.

"Taking advantage of a natural terrace or embankment extending almost like a semicircle in front of the little grove in which we had taken refuge, and at a distance of but a few hundred yards from the latter, I determined, by driving the Indians beyond, to adopt it as our breastwork, or line of defense. This was soon accomplished, and we found ourselves deployed behind a natural parapet or bulwark, from which the troopers could deliver a carefully directed fire upon their enemies, and, at the same time, be protected largely from the bullets of the latter. The Indians made repeated and desperate efforts to dislodge us, and force us to the level plateau. Every effort of this kind proved unavailing.

"Rather a remarkable instance of rifle shooting occurred in the early part of the contest. I was standing in a group of troopers, and with them was busily engaged firing at such of our enemies as exposed themselves. Bloody Knife was with us, his handsome face lighted up by the fire of battle, and the desire to avenge the many wrongs suffered by his people at the hands of the ruthless Sioux. All of us had had our attention drawn more than once to a Sioux warrior who, seeming more bold than his fellows, dashed repeatedly along the front of our lines, scarcely 200 yards distant, and, although the troopers had singled him out, he had thus far escaped untouched by their bullets. Encouraged by his success, perhaps, he concluded to taunt us again, and at the same time exhibit his own daring, by riding along the lines at full speed, but nearer than before. We saw him coming. Bloody Knife, with his Henry rifle poised gracefully in his hands, watched his coming, saying he intended to make this his enemy's last ride. He would send him to the happy hunting ground. I told the interpreter to tell Bloody Knife that at the moment the warrior reached a designated point directly opposite to us, he, Bloody Knife, should fire at the rider, and I, at the same instant, would fire at the pony.



"A smile of approval passed over the swarthy features of the friendly scout as he nodded assent. I held in my hand my well-tried Remington. Resting on one knee, and glancing along the barrel, at the same time seeing that Bloody Knife was also squatting low in the deep grass with rifle leveled, I awaited the approach of the warrior to the designated point. On he came, brandishing his weapons, and flaunting his shield in our faces, defying us to come out and fight like men. Swiftly sped the gallant little steed that bore him, scarcely needing the guiding rein. Nearer and nearer both horse and rider approached the fatal spot, when, sharp and clear, and so simultaneous as to sound as one, rang forth the report of the two rifles. The distance was less than 200 yards. The Indian was seen to throw up his arms and reel in his saddle, while the pony made one final leap, and both fell to the earth. A shout rose from the group of troopers, in which Bloody Knife and I joined. The same moment a few of the comrades of the fallen warrior rushed to his rescue, and, without dismounting from their ponies, scarcely pulling rein, clutched up the body, and the next moment disappeared from view.

"Foiled in their repeated attempts to dislodge us, the Indians withdrew to a point beyond the range of our rifles for the apparent purpose of devising a new plan of attack. Of this we soon became convinced. Hastily returning to a renewal of the struggle, we saw our adversaries arrange themselves in groups along our entire front. They were seen to dismount, and the quick eyes of Bloody Knife detected them making their way toward us by crawling through the grass. We were at a loss to comprehend their designs, as we could not believe they intended to attempt to storm our position on foot. We were not left long in doubt. Suddenly, and almost as if by magic, we beheld numerous small columns of smoke shooting up all along our front.

"Calling Bloody Knife and the interpreter to my side, I inquired the meaning of what we saw. 'They are setting fire to the long grass, and intend to burn us out,' was the scout's reply, at the same time keeping his eyes intently bent on the constantly increasing columns of smoke. His features wore a most solemn look; anxiety was plainly depicted there. Looking to him for suggestions and advice in this new phase of our *danger*, I saw his face gradually unbend, and a scornful smile

part his lips. 'The Great Spirit will not help our enemies,' was his muttered reply to my question. 'See,' he continued, 'the grass refuses to burn.' Casting my eyes along the line formed by the columns of smoke, I saw that Bloody Knife had spoken truly when he said, 'The grass refuses to burn.' This was easily accounted for. It was early in the month of August; the grass had not ripened or matured sufficiently to burn readily. A month later, and the flames would have swept us back to the river as if we had been surrounded by a growth of tinder. In a few moments the anxiety caused by the threatening of this new and terrible danger was dispelled. While the greatest activity was maintained in our front by our enemies, my attention was called to a single warrior, who, mounted on his pony, had deliberately, and, as I thought, rashly, passed around our left flank,—our diminished numbers preventing us from extending our line close to the river,—and was then in rear of our skirmishers, riding slowly along the crest of the low river bank with as apparent unconcern as if in the midst of his friends, instead of being almost in the power of his enemies. I imagined that his object was to get nearer to the grove in which our horses were concealed, and toward which he was moving slowly, to reconnoitre, and ascertain how much force we held in reserve. At the same time, as I can never see an Indian engaged in an unexplained act without conceiving treachery or stratagem to be at the bottom of it, I called to Lieut. Varnum, who commanded on the left, to take a few men and endeavor to cut the wily interloper off. This might have been accomplished but for the excessive zeal of some of Varnum's men, who acted with lack of caution, and enabled the Indian to discover their approach, and make his escape by a hurried gallop up the river. The men were at a loss even then to comprehend his strange manœuvre; but, after the fight had ended, and we obtained an opportunity to ride over and examine the ground, all was made clear, and we learned how narrowly we had escaped a most serious, if not fatal, disaster.

"The river bank in our rear was from twenty to thirty feet high. At its base, and along the water's edge, ran a narrow, pebbly beach. The redskins had hit upon a novel, but to us a most dangerous, scheme for capturing our horses, and, at the same time, throwing a large force of warriors directly in



our rear. They had found a pathway beyond our rear, leading from the large tract of timber in which they were first concealed, through a cut or ravine in the river bank. By this they were enabled to reach the water's edge, from which point they could move down the river, following the pebbly beach referred to, the height of the river bank protecting them perfectly from our observation. Thus they would have placed themselves almost in the midst of our horses before we could have become aware of their designs. Had they been willing, as white men would have been, to assume greater risks, their success would have been assured. But they feared that we might discover their movements, and catch them while strung out along the narrow beach, with no opportunity to escape. A few men on the bank could have shot down a vastly superior force. In this case the Indians had sent on this errand about one hundred warriors. After the discovery of this attack, and its failure, the battle languished for a while, and we were surprised to notice, not very long after, a general withdrawal from in front of our right, and a concentration of their forces opposite our left. The reason for this was soon made clear to us. Looking far to the right, and over the crest of the hills already described, we could see an immense cloud of dust rising and rapidly approaching. We could not be mistaken. We could not see the cause producing this dust; but there was not one of us who did not say to himself, 'Relief is at hand.' A few moments later a shout arose from the men. All eyes were turned to the bluffs in the distance, and there were to be seen coming, almost with the speed of the wind, four separate squadrons of Uncle Sam's best cavalry, with banners flying, horses' manes and tails floating on the breeze, and comrades spurring forward in generous emulation as to which squadron should land its colors first in the fight. It was a grand and welcome sight; but we waited not to enjoy it. Confident of support, and wearied from fighting on the defensive, now was our time to mount our steeds and force our enemies to seek safety in flight, or to battle on more even terms. In a moment we were in our saddles and dashing after them. The only satisfaction we had was to drive at full speed for several miles a force outnumbering us five to one. In this pursuit we picked up a few ponies, which the Indians were compelled to abandon on account of wounds or *exhaustion*. Their wounded, of which there were quite a

number, and their killed, as afterward acknowledged by them when they returned to the agency to receive the provisions and fresh supplies of ammunition which a sentimental government, manipulated and directed by corrupt combinations, insists upon distributing annually, were sent to the rear before the flight of the main body. The number of Indians and ponies killed and wounded in this engagement, as shown by their subsequent admission, equaled that of half our entire force engaged.

"That night the forces of the expedition encamped on the battle ground, which was nearly opposite the mouth of Tongue river. My tent was pitched under the hill from which I had been so unceremoniously disturbed at the commencement of the fight; while under the wide-spreading branches of a neighboring cottonwood, guarded and watched over by sorrowing comrades, who kept up their lonely vigils through the night, lay the mangled bodies of two of our companions of the march, who, although not present nor participating in the fight, had fallen victims to the cruelty of our foes."

The victims in question were the veterinary surgeon and the sutler of the regiment, who, being civilians, were not required to keep the ranks, but could ride as they pleased. These men were murdered and scalped by the Indians, who surprised them as they lingered in the rear of the main column.

The engagement above described occurred near the mouth of the Tongue river; and, for a week afterward, as the exploring party pursued its march, it entered upon a series of sharp skirmishes with a large force of Indians, who, however, were invariably repulsed, although the troops did not escape many severe casualties.

In 1874 and 1875 the Yellowstone valley enjoyed comparative quiet, although there were hostile bands of Sioux roaming over the valleys of the Big Horn and Powder rivers, and the entire western frontier was ravaged by them. In June, 1875, a steamboat expedition, consisting of seven officers and 100 men, commanded by Col. Forsyth, of Lieut.-Gen. Sheri-



dan's staff, ascended the Yellowstone a distance of 430 miles, selecting sites for military posts at the mouth of the Tongue and Big Horn rivers, in order to better deal with the Indians. This expedition returned without encountering any hostile red men.

On February 21st, 1876, an expedition left Fort Ellis, near Bozeman, under command of Major Brisbin, numbering 221 officers and men, for the succor of a party of citizens, who were besieged by Indians at Fort Pease, near the confluence of the Big Horn with the Yellowstone. The original party consisted of forty-six men, who defended themselves desperately in a stockade until the relief column of troops arrived. Six persons were killed, eight wounded, and thirteen escaped during the night, leaving only nineteen in the stockade, who were rescued by the troops.

Later, 1876, the government was compelled to send out a force against certain wild and hostile bands of Indians who were roaming about Dakota and Montana, not only attacking settlers and immigrants, but also making war upon the Mandans and Arickarees, who were friendly to the whites. To this class belonged the notorious Sitting Bull, who was not a chief, but only a "head man," and whose immediate followers did not exceed thirty or forty lodges. Another disaffected chief was Crazy Horse, an Ogallala Sioux, who properly belonged to the Red Cloud Agency, and whose band comprised, perhaps, 120 lodges, numbering about 200 warriors. These bands had never accepted the agency system, and would not recognize the authority of the government. They had been notified, however, by the Department of the Interior, that they must, before the 31st of January, 1876, retire to the reservations to which they were assigned, or take the alternative of being brought to subjection by the military power. Every effort, meanwhile, to pacify these bands, proved unsuccessful. *They refused* to come into the agencies, settle down and be

peaceable. A strong force of troops was, therefore, set in motion to subdue them. On the 1st of March, Col. J. J. Reynolds, with a force of 883 men, moved out from Fort Fetterman, on the North Platte river, in search of the hostiles, and, after marching through deep snow and suffering great hardship, reached the mouth of the Little Powder river on March 17th, at which point he attacked and defeated a large village of Sioux and Northern Cheyennes, under Crazy Horse, destroying 105 lodges and a great amount of ammunition and supplies, and capturing a large herd of animals. The troops, however, had suffered so much from the severity of the weather that they were compelled to return to Fort Fetterman to recuperate.

Operations were resumed by this force toward the end of the following May. On the 29th of that month, a column of 1,000 men, under the command of Gen. Crook, again left Fort Fetterman, and on the 13th and 17th of June the Indians were discovered in large numbers on the Rosebud. Here a desperate fight took place, lasting several hours, resulting in the flight of the Indians after heavy losses. The casualties to the troops in this engagement were nine killed and twenty-one wounded. From the strength of the hostiles who attacked Gen. Crook's column, it now became apparent, that not only Crazy Horse and his small band had to be fought, but also a large number of Indians who had re-enforced them from the agencies along the Missouri, and from the Red Cloud and Spotted Tail Agencies, near the boundary line between Dakota and Nebraska. Under these circumstances, Gen. Crook deemed it best to await re-enforcements and supplies before proceeding further.

**The Massacre of Custer's Command.**—Simultaneously with Gen. Crook's operations, Gen. Terry had concentrated 400 infantry and 600 of the Seventh Cavalry, the latter under Gen. George A. Custer, at Fort Lincoln. With this force he

left the fort on the 17th of May, and reached the mouth of the Powder river on the 7th of June, where a supply camp was established. From this point, six troops of cavalry, under Major Reno, scouted up the Powder river to its forks, and across the country to the Rosebud, following down the last-named stream to its mouth, definitely locating the Indians in force in the vicinity of the Little Big Horn river. During Major Reno's scout, the force under Gen. Terry moved up the south bank of the Yellowstone, and formed a junction with a column consisting of six companies of infantry and four troops of cavalry, under Col. Gibbon, which had marched from Fort Ellis eastward, along the north bank of the Yellowstone, to a point opposite the Rosebud.

On June 21st, after a conference with Cols. Gibbon and Custer, Gen. Terry, who was in supreme command, communicated the following plan of operations: Gibbon's column was to cross the Yellowstone near the mouth of the Big Horn, march up this stream to the junction with the Little Big Horn, and thence up the latter, with the understanding that it would arrive at the last-named point on June 26th. Custer, with the whole of the Seventh Cavalry, should proceed up the Rosebud until the direction of the Indian trail found by Reno should be ascertained. If this led to the Little Big Horn, it should not be followed; but Custer should keep still further south before turning toward that river, in order to intercept the Indians should they attempt to slip between him and the mountains, and also in order, by a longer march, to give time for Col. Gibbon's column to come up. On the afternoon of June 22d, Custer's column set out on its fatal march up the Rosebud, and on the morning of the 25th he and his immediate command were overwhelmed and pitilessly slaughtered by the Indians, who were concentrated in the valley of the Little Big Horn, to the number of over 2,500 fighting men. The harrowing details of the massacre are mainly a matter of



conjecture. No officer or soldier who rode with their gallant leader into the valley of the Little Big Horn was spared to tell the tale of the disaster. The testimony of the field where the mutilated remains were found showed that a stubborn resistance had been offered by the troops, and that they had been beset by overpowering numbers. The bodies of 204 of the slain were buried on the battle ground.

**The Brilliant Work of Gen. Miles.**—After this calamity had befallen the expedition, additional troops were sent to the scene of operations as rapidly as they could be gathered from distant posts, but too late to be of immediate use. The exultant Indians had already broken up their organization, and scattered far and wide as bands of marauders, placing themselves beyond the reach of punishment in a body. In the autumn most of the troops were withdrawn from Montana, leaving only a strong garrison, under the command of Gen. Nelson A. Miles, who was then Colonel of the Fifth Infantry, to occupy a cantonment at the mouth of the Tongue river (now Fort Keogh). Through the energy and bravery of this command, the Yellowstone valley was soon entirely rid of the Indians. On October 10th a train of ninety-four wagons, with supplies, left Glendive for the cantonment at the mouth of the Tongue river, and was beset the same night by Indians, seven or eight hundred strong, under Sitting Bull, who so crippled it that it was forced to turn back to Glendive for re-enforcements. These obtained, it resumed its journey, the escort numbering eleven officers and 185 men, in the hope of getting the much-needed supplies to the garrison. On the 15th the Indians attacked once more, but were driven back at the point of the bayonet, while the wagons slowly advanced. In this way the train proceeded until the point was reached from which the return had been previously made. Here the Indians became more determined, firing the prairie, and compelling the wagons to advance through the flames. On the 16th of October an



Indian runner brought in the following communication from Sitting Bull to Col. Otis, commanding the escort:

“YELLOWSTONE.

“I want to know what you are doing traveling on this road. You scare all the buffaloes away. I want to hunt in this place. I want you to turn back from here. If you don't, I will fight you again. I want you to leave what you have got here, and turn back from here. I am your friend,

“SITTING BULL.

“I mean all the rations you have got and some powder. Wish you would write as soon as you can.”

Col. Otis replied to this cool request that he intended to take the train through, and would accommodate the Indians with a fight at any time. The train moved on, the Indians surrounding it, and keeping up firing at long range. Presently a flag of truce was sent in by Sitting Bull, who said that his men were hungry, tired of war, anxious for peace, and wished Col. Otis to meet him in council outside the lines of the escort. This invitation was declined; but the Colonel said he would be glad to meet Sitting Bull inside the lines. The wary savage was afraid to do this, but sent three chiefs to represent him. Col. Otis told them he had no authority to treat with them, but that they could go to Tongue river and make their wishes known. After giving them a present of hard bread and bacon, they were dismissed, and soon the entire body disappeared, leaving the train to pass on unmolested.

On the night of the 18th Col. Otis met Col. Miles, with his entire regiment, who had advanced to meet the train, being alarmed for its safety. Learning that Sitting Bull was in the vicinity, Col. Miles at once pursued him, and overtook him at Cedar creek. Here an unsatisfactory parley took place, Sitting Bull refusing peace except upon terms of his own making. The council broke up, the Indians taking position immediately for a fight. An engagement followed, the Indians being driven

from the field, and pursued forty-two miles to the south side of the Yellowstone. In their retreat they abandoned tons of dried meat, quantities of lodge poles, camp equipage and broken-down cavalry horses. Five dead warriors were left on the field, besides those they were seen to carry away. The force of Col. Miles numbered 398 rifles, against opponents estimated at over 1,000. On October 27th over four hundred lodges, numbering about 2,000 men, women and children, surrendered to Col. Miles, and Sitting Bull, with his own small band, escaped northward. He was vigorously pursued; but the trail was obliterated by the snow, and the troops returned to the cantonment. Again, in December, a portion of the command, under Lieut. Baldwin, left their quarters in search of Sitting Bull, who was found and driven south of the Missouri, retreating to the Bad Lands. Less than two weeks afterward the same command surprised Sitting Bull on the Redwater, capturing the camp and its contents, the Indians escaping with little besides what they had upon their persons, and scattering southward across the Yellowstone. Meanwhile, Col. Miles, with his main command, numbering 436 officers and men, had moved against the Sioux and Cheyennes under Crazy Horse, in the valley of the Tongue river; and, after repeated engagements, lasting from the 1st of January to the 8th of the same month, over fields covered with ice and snow to the depth of from one to three feet, completely vanquished the hostiles, and required them to surrender at the agencies. After the surrender of Crazy Horse, the band of Sitting Bull, in order to escape further pursuit, retreated beyond the northern boundary, and took refuge upon British soil, where this troublesome Indian remained until the spring of 1883, at which time he returned to the United States, and was assigned to the Standing Rock Indian Agency, in Dakota. In May, 1877, Col. Miles led an expedition against a band of renegade Indians, under Lamé Deer, that had broken away from those who had sur-

rendered at Tongue river. This band was surprised near the Rosebud; and, while negotiations for a surrender were in progress, the Indians, either meditating or fearing treachery, began firing, and ended the parley. The fight was resumed, and the Indians were driven eight miles, fourteen having been killed, including the chiefs *Lame Deer* and *Iron Star*, and 450 horses and mules, and the entire camp equipage fell into the hands of the troops. This band was afterward pursued so hotly that it eventually surrendered at the *Red Cloud* and *Spotted Tail* Agencies.

On the 18th of September, 1877, Col. Miles, having learned that the hostile *Nez Percés*, from Idaho, under Chief *Joseph*, pursued by Gens. *Howard* and *Sturgis*, were likely to reach the frontier before they could be overtaken, started out from his cantonment to intercept them. By a series of rapid marches on the flank of the hostiles, after traversing a distance of 267 miles, Col. Miles came up with the *Nez Percé* camp on the morning of September 30th at the *Bear Paw Mountains*, and compelled its surrender after a desperate resistance, with severe losses on both sides.

The troops under the command of Col. Miles, in their operations during the years 1876 and 1877, marched no less than 4,000 miles, captured 1,600 horses, ponies and mules, destroyed a large amount of camp equipage belonging to the hostiles, caused the surrender of numerous bands, and cleared the country of upward of seven thousand Indians. By this series of brilliant successes not less than 400 miles of the *Yellowstone valley* were opened to settlement.

**Current Ferries.**—On the *Yellowstone river*, as well as on many other Western streams, a method of ferrying is in vogue which presents some peculiarities to Eastern eyes. The swift current is used as a motor for swinging a flat-bottomed ferry-boat over the river. An elevated wire cable is stretched from shore to shore, Pulleys, attached by stout ropes to either







end of the boat, are geared to the cable. The craft is shoved off from the brink at an angle oblique to the current, and starts languidly, the pulleys moving spasmodically at first. Presently the full force of the tide is felt, and the pulleys spin along the cable, carrying the boat across at fine speed. Then, reaching the slacker water near the opposite shore, the pulleys resume the jerky progress on their cable track, and the boat grates upon the beach or puts her broad nose gently upon the strand precisely where it is wanted. The steering is done by means of a wheel, or, rather, windlass, used to taughten or slacken the pulley ropes, and so get the proper angle of resistance to the current. These ferry-boats scorn any suggestion of an ordinary rudder in the water. They are guided by the guy-ropes only. The ferry-men usually charge a dollar toll upon each horse and each wagon, which seems good pay for little labor. They lament, however, that the good old times are gone when five dollars was the ordinary tax for this service.

**Fort Keogh** (773 miles from St. Paul; population, 600) is situated a mile and a half west of the Tongue river, and two miles from Miles City, in a beautiful and fertile portion of the Yellowstone valley. The fort was built in 1877 by Gen. N. A. Miles, and is the most important post in the Northwest, having a large garrison of infantry and cavalry, the numbers varying with the demands of other military stations on the frontier. Fort Keogh consists of a number of commodious barracks, hospital, school, chapels, and other buildings, besides sixteen attractive cottage residences for officers and their families. The fort draws its supply of water from the Yellowstone, and feeds a pretty fountain in the square, about which the residences are arranged.

**Lignite** (777 miles from St. Paul; population, 30) is a station established in the midst of a lignite coal district, and the locomotives take in their fuel at this point.

**Horton and Hathaway** (distant respectively from St. Paul



Big Horn River, Bridge, and Tunnel.

782 and 791 miles) are stations established for the convenience of ranchmen in the fine grazing country southward.

**Rosebud** (802 miles from St. Paul; population, 150) is situated at the mouth of the Rosebud river. The extensive valley of this stream is admirably adapted to cattle-raising, and its plains are dotted with settlements.

**Forsyth** (815 miles from St. Paul; population, 500).—The place is named in honor of Gen. James W. Forsyth, who was the first officer to land by steamer at the present site of the town, and for a long time it was known as Forsyth's Landing. It is situated in a delightful valley immediately on the banks of the Yellowstone river, and is surrounded by trees and immense bluffs rising abruptly on the south and west. Forsyth is the end of a freight train division, and the supply point for the settlers of the Rosebud bottom, on the south side, and the Big and Little Porcupine rivers, on the north side, of the Yellowstone. The town has five general merchandise stores. The Northern Pacific Railroad Company has a round-house and repair shops here. Stock yards have been laid out to meet the needs of large cattle shipments from this point. Some land near Forsyth is under cultivation, yielding fair crops of grain and vegetables.

**Howard, Sanders and Myers** (distant respectively 826, 836 and 847 miles from St. Paul) are unimportant stations, serving to supply the needs of the settlers of the surrounding country.

**Big Horn** (858 miles from St. Paul, at the mouth of the Big Horn river) is the diverging point for a country well adapted to stock-raising. The valley of the Big Horn is fertile, and its inclosing hills are covered with excellent grazing.

The railroad crosses the turbulent waters of the Big Horn river, about two miles from the mouth of that stream, by a bridge 600 feet in length. Passing over the narrow inter-





Pompey's Pillar, Yellowstone Valley, Montana.



vening valley, it presently penetrates the bluffs which hem in the Yellowstone river, by means of a tunnel 1,100 feet long, and emerges into the comparatively small Yellowstone valley beyond.

**Custer** (864 miles from St. Paul).—The station is on the Crow Indian Reservation; the town is on the opposite side of the Yellowstone, and is called Junction City. It has a population of about 200. Custer is the station for Fort Custer, thirty miles distant, one of the largest military posts in the West, and situated near the scene of the Custer massacre. A daily stage runs from the station to the fort.

**Pompey's Pillar** (888 miles from St. Paul) is a mass of yellow sandstone, rising abruptly to a height of 400 feet, its base covering nearly an acre of ground. About half way up, on the north side, is an inscription, of which the following is a miniature *fac-simile*,

W<sup>m</sup> Clark  
July 25<sup>th</sup> 1806

carved deeply in the rock by the explorer himself on his return journey across the continent. This inscription covers a space three feet long and eighteen inches high, and is surrounded by a border. It appears that Captain Clark and his party were coming down the Yellowstone river in a boat, when they were overtaken by a storm which suddenly burst upon them. After it had cleared, they landed to examine a very

remarkable rock, situated in an extensive bottom on the right, a short distance from the shore. "This rock," wrote the explorer, "is nearly 200 paces in circumference, and about 200 feet high, accessible from the southeast only, the other sides consisting of perpendicular cliffs of a light-colored, gritty stone. The soil on the summit is five or six feet deep, of a good quality, and covered with a short grass. The Indians have carved the figures of animals and other objects on the sides of the rock. From this height the eye ranges over a wide extent of variegated country. On the southwest are the Rocky Mountains, covered with snow. There is a low mountain about fifty miles distant, in a northwest direction, and at the distance of thirty-five miles the southern extremity of what are called the Little Wolf Mountains. The low grounds of the river extend nearly six miles to the southward, when they rise into plains reaching to the mountains, and are watered by a large creek, while at some distance below a range of highlands, covered with pine, stretches on both sides of the river in a direction north and south. The north side of the river for some distance is surrounded by jutting, romantic cliffs, succeeded by rugged hills, beyond which the plains are again open and extensive, and the whole country is enlivened by herds of buffalo, elk and wolves." After enjoying the prospect from this rock, to which Captain Clark gave the name of Pompey's Pillar, and carving his name and the date of his visit upon the stone, the explorer continued on his route. For the better protection of Captain Clark's name against vandals, who have already tried to cut their own insignificant designations within the border containing that of the heroic explorer, the railroad company has caused a screen to be placed over the relic for its protection.

**The Crow Indian Reservation.**—The entire southern shore of the Yellowstone river, from a point not far from Forsyth westward to the Big Boulder creek, and extending

south to Wyoming, was set apart by Congress, in 1868, as a reservation for the Crow Indians. This is one of the most fertile and best watered areas in Montana, including the valleys of all the large streams which flow into the Yellowstone above the Rosebud river. The reservation stretches along the Yellowstone for 250 miles, and has an average width of about 75 miles. Upon this territory, which is nearly as large as the State of Massachusetts, live not more than 3,000 Indians, who gather about the agency during winter, subsisting on government beef and flour, and spend the summer in roaming about the country. They own 40,000 ponies, and are a very rich tribe from every point of view. The Crows have long been friendly to the whites; but they are far inferior to their old enemies, the Sioux, in intelligence, handicraft and bravery. In 1882 they re-ceded to the government, for a handsome consideration in cash, a strip of the western end of their domain, about forty miles long by sixty wide, which embraces the Clark's Fork gold and silver mines, and it is only a question of time when the demands of the country for the release of all this valuable tract from its present possessors will be heard. Most of eastern Montana was originally claimed by the Crows, who at one time were a great and powerful nation. That the country was highly appreciated by these Indians is evidenced by the words of Arrapooish, a Crow chief, to the fur trader Robert Campbell, as told in "Captain Bonneville's Adventures," by Washington Irving.

"The Crow country is a good country. The Great Spirit has put it exactly in the right place. When you are in it, you fare well; whenever you go out of it, whichever way you travel, you fare worse. If you go to the south, you have to wander over great barren plains; the water is warm and bad, and you meet the fever and ague. To the north it is cold; the winters are long and bitter, with no grass; you can not keep horses there, but must travel with dogs. On the Columbia they are poor and dirty, paddle about in canoes, and eat fish.





Indian Camp on the Line of the Northern Pacific Railroad,



Their teeth are worn out; they are always taking fish-bones out of their mouths. To the east they live well; but they drink the muddy waters of the Missouri. A Crow's dog would not drink such water. About the forks of the Missouri is a fine country,—good water, good grass and plenty of buffalo. In summer it is almost as good as the Crow country; but in winter it is cold, the grass is gone, and there is no salt weed for the horses. The Crow country is exactly in the right place. It has snowy mountains and sunny plains, all kinds of climate, and good things for every season. When the summer heats scorch the prairies, you can draw up under the mountains, where the air is sweet and cool, the grass fresh, and the bright streams come tumbling out of the snowbanks. There you can hunt the elk, the deer and the antelope when their skins are fit for dressing; there you will find plenty of black bear and mountain sheep. In the autumn, when your horses are fat and strong from the mountain pastures, you can go down into the plains and hunt buffalo or trap beaver on the streams. And when winter comes on, you can take shelter in the woody bottoms along the rivers; there you will find buffalo meat for yourself, and cottonwood bark for your horses. Or you may winter in the Wind river valley, where there is salt weed in abundance. The Crow country is exactly in the right place. Everything good is to be found there."

The Crows have always been friendly to the whites. In the early days of settlement of the Montana mining country they served as a barrier to protect the mining camps from the incursions of the hostile Sioux. Later, in the military campaigns for the conquest of the Sioux, they were of much value as scouts and allies to the troops.

**Huntley** (904 miles from St. Paul), a small trading town in the midst of a good stock-raising country. A stockade was built here to protect a frontier store in the days of the Indian occupancy of the Yellowstone country.

**The Legend of Skull Butte.**—The high and rugged elevation across the river to the left of the railroad, just before reaching Billings, is named Skull Butte. Tradition says that

about seventy years ago several hundred lodges of Indians, belonging to the powerful Crow nation, were encamped on the river bottom, when small-pox broke out, and the ravages of the disease were so fearful that in a short time the tribe was decimated. To appease the anger of the Great Spirit, it was determined by the chief medicine man that forty young warriors should offer themselves as a sacrifice. Volunteers for this purpose were called for, and soon the allotted number of braves, who had recently passed through the ordeal of the "sun dance," and assumed the status of warriors, presented themselves. With much ceremony the preparation for the sacrifice was conducted, and, after all the rites had been performed, the heroic band mounted their ponies, forded the river, ascended the steep heights opposite, and made themselves ready for their fate. It was determined that they and their horses should be blindfolded, and, rushing at full speed to the steep edge of the cliff, should plunge to the rocky strand hundreds of feet below. The word was given, and the forty braves, with tremendous shouts, urged their steeds to the brink of the cliff, and all went down to their destruction. For years afterward, bleaching skulls and bones of men and horses were found around the base of Skull Butte.

The railroad crosses to the north side of the Yellowstone upon a substantial truss bridge, near the old settlement of Coulson, at the foot of Skull Butte.



## MONTANA DIVISION.

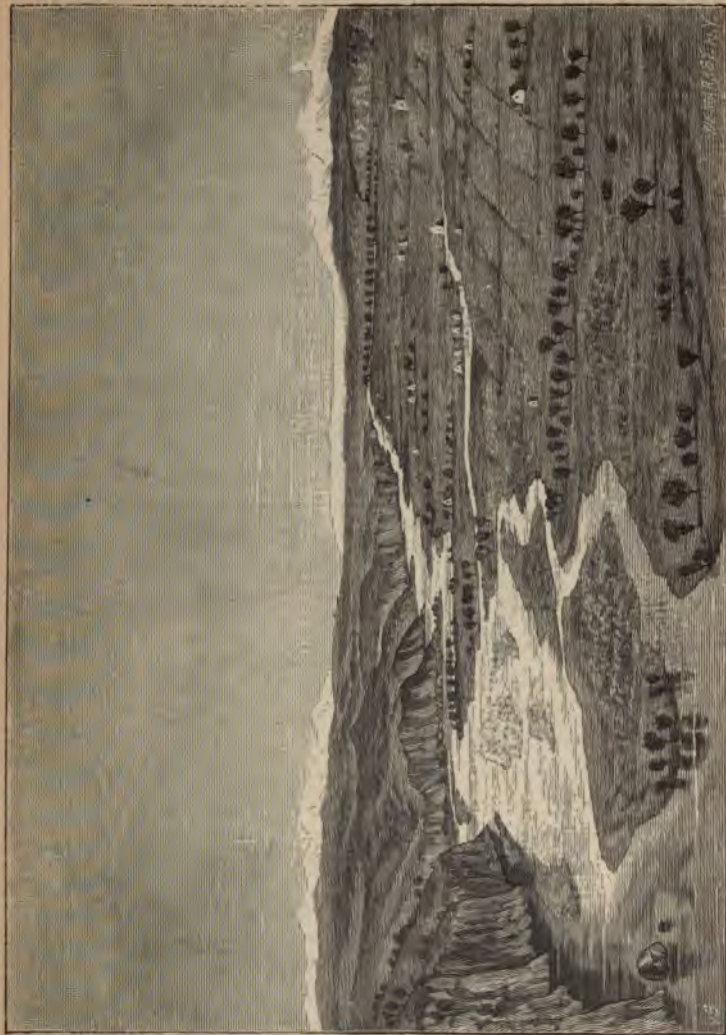
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BILLINGS TO HELENA.—DISTANCE, 239 MILES.

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**Billings** (917 miles from St. Paul; population, 2,500) is named in honor of Hon. Frederick Billings, late President of the Northern Pacific Railroad Company. It is situated at the foot of Clark's Fork bottom, on a beautiful plain, sloping down to the Yellowstone river, in the heart of the fertile and picturesque valley, and is the county seat of the new county of Yellowstone. The town was founded in the spring of 1882, and contains over 400 buildings, with many more under construction. Among the noticeable buildings are the handsome brick church edifice, the gift of Mrs. Billings; a large bank building, constructed in part of stone quarried in the neighboring cliffs; and a number of substantial brick business blocks. There are three hotels, and numerous stores of all branches of trade. The public school house is a large two-story brick edifice. There is a daily newspaper, with a weekly edition. The Yellowstone Gun Club is a social organization, having eighty handsome rooms. This is the terminus of the Yellowstone Division, and the beginning of the Montana Division, of the railroad. The company has built a substantial round-house, shops, etc., for the purpose of a division terminus. The Clark's Fork Bottom Ditch, thirty-nine miles long, terminating at Billings, is designed to irrigate 100,000 acres of fertile soil. The valley, in which lies Clark's Fork bottom, contains over 125,000 acres





Valley of the Yellowstone above Billings, Montana.



of excellent land, capable of producing all kinds of cereals and vegetables. Billings has tributary to it the Barker and Maginnis gold mining region, situated about 100 miles to the northward, and the Clark's Fork mines to the southeast. On one side, to the westward, are the great Musselshell and Judith valleys; and on the other, to the eastward, are the Little and Big Horn valleys. Large veins of coal of a good quality are found within a short distance of the town, and extensive beds of excellent coal exist in the Bull Mountains, about thirty miles distant. Billings is a supply and trading point for a large extent of farming and grazing country within a radius of over 100 miles. It also receives the trade of the Stinking Water District, Wyoming Territory, a large and prosperous tract of country. The town possesses extensive cattle yards, and is one of the principal cattle shipping points in Montana, great numbers of cattle being driven here for shipment from the Musselshell and Judith ranges. The Yellowstone river affords a fine water-power for manufactories, there being a fall of eleven feet in a mile. Large shipments of wool are made from here, and a good wool market is established.

**Montana Stock and Sheep Raising.**—Abundance of nutritious grasses, mildness of climate, and markets easy of access, are a combination of advantages which render Montana famous as a cattle-raising region. Montana steers command the highest prices in the Chicago cattle mart, and the Northern Pacific Railroad, with over 700 miles of track within the Territory, affords ready transportation from the grazing fields to the East. All the better varieties of grass do as well in Montana as elsewhere; but the most valuable of the native grasses is the bunch grass. This grows most luxuriantly upon the high rolling plains, of which a large part of the surface of the Territory consists. It begins to renew itself in the early spring, before the ground is yet free from frost, rapidly attains its growth, is early cured, and stands as hay through the remainder

of the year until the succeeding spring. Throughout the winter months it perfectly retains its sweet and nutritious qualities. The manner of its growth is similar to that of the short, curly and quickly cured buffalo grass of the plains. It stands in detached clusters or bunches, between which are visible interstices of bare ground. Its clusters, however, are finer, denser, of much taller growth, and cover the ground more closely and compactly than the tufts of buffalo grass. A single acre of bunch grass is fully equal to three acres of average buffalo grass in the quantity it furnishes of actual sustenance for cattle. It is, moreover, a stronger nutriment than ordinary plains vegetation, being unexcelled by the best cultivated grasses, timothy hay or clover.

The railroad, except where the main line crosses the mountain ranges, follows a system of valleys, unsurpassed in their broad, beautiful and fertile surfaces, and extending across the Territory from east to west. These valleys are free to all for pasturage purposes. Over these great natural ranges the herds roam at will, being separated, or "rounded up," by their owners only twice a year,—in the spring to brand the calves, and in the fall to choose the fat steers for market. The principal cattle ranges of the Territory, aside from the great valley of the Yellowstone, are on the headwaters of the Little Missouri, in the southeast; the valleys of the Powder, the Tongue, the Rosebud, the Big Horn (still in possession of the Crow tribe of Indians), and the Clark's Fork, which meet the Yellowstone region from the south; the great valley of the Sun river, the broad basin of the Judith, the magnificent valley of the Musselshell, all situated northward of the Yellowstone, and intermediate between the Bull, Belt, Big Snowy and Little Rocky ranges; the valleys of the East and West Gallatin, Madison and Jefferson rivers, adjacent to the eastern bases of the Rocky Mountains; and the intramontane country of the Clark's Fork of the Columbia, westward.

The customary way of managing a band of cattle in Montana is simply to brand them and turn them out upon the prairie. Under this careless management some steers are lost, which stray away or are stolen. A more careful system is to employ herders, one man for every 1,500 or 2,000 head of cattle, whose duty it is to ride about the outskirts of the range, follow any trails leading away, and drive the cattle back, seeking through neighboring herds, if there are any, for cattle that may have mistaken their companionship. At the spring round-up a few extra men have to be employed for several weeks. No human being dare go among the cattle on foot. If he did he would be gored or trampled to death at once. The animals are only accustomed to horsemen, of whom they are in wholesome terror; but the sight of a person on foot instantly causes a rush toward the strange appearance, and death is certain to him who fails to find a place of refuge. In starting a new herd, cows, bulls and yearlings are bought; but calves under one year old running with the herd are not counted.

The average cost of raising a steer, not counting interest or capital invested, is from sixty cents to one dollar a year, so that a four-year-old steer raised from a calf and ready for market costs about \$4. A herd consisting of yearlings, cows and bulls, will have no steers ready for the market in less than two or three years. Taking into account the loss of interest on capital invested before returns are received, besides all expenses and ordinary losses, the average profit of stock-raising in Montana during the last few years, has been at least thirty per cent. per annum. Some well-informed cattle men estimate it at from thirty to forty per cent.

A flock of sheep containing 1,000 head and upward, in good condition and free from disease, are procurable in Western Montana for from \$2 to \$3 per head. They must be herded summer and winter in separate flocks of not more than 2,000 or 3,000 each, must be corraled every night, and guarded



against the depredations of dogs and wild animals. Hay must be provided to feed them while the ground is covered with snow, and sheds must be erected to protect them from severe storms. They must, however, be raised by themselves. Cattle and sheep can not live together on the same range. The latter not only eat down the grass so closely that nothing is left for the cattle, but they also leave an odor which is very offensive to the others for at least two seasons afterward. But, notwithstanding that the cost of managing sheep is greater than that of handling cattle, the returns from sheep-raising are quicker and larger. While a herd of young cattle begin to yield an income only at the expiration of three years, sheep yield a crop of wool the first summer after they are driven upon a range, and the increase of the band is much greater than that of cattle, being from seventy-five per cent. to 100 per cent. each year. The wool is of good quality, free from burs, and brings a good price on the ranch, agents of Eastern houses being always on hand eager to buy it. The profits of sheep-raising are generally estimated at a higher figure than those of cattle-raising. The lowest calculation is based upon a net profit of from twenty-five to thirty-five per cent. on the whole investment, although occasionally larger returns reward the fortunate stockman.

There are few large bands of horses in Montana; but breeding these animals is beginning to receive attention. Breeders estimate that fifty brood mares and a draught stallion, costing in all \$2,500, placed upon a stock ranch where the proprietor does his own herding, will in the course of five years be worth \$10,000. Horses are more hardy than sheep or cattle, being better able to endure cold weather, and to "rustle," or paw through the snow that covers their pasturage. But they are so much more valuable than other species of stock that most owners prefer to have their bands either fenced in or carefully herded. The best horse farms are those in small valleys, ten or twelve miles long, on whose sides the foot-hills extend up to high



mountains. By fencing across the ends of such a valley the horses are prevented from straying.

**The Cow Boys.**—As the train passes through the Yellowstone valley, it is no uncommon sight to see herds of sleek cattle contentedly grazing on the russet hills. Sometimes, also, droves of one or two thousand are noticed slowly advancing in a broad column from the direction of the distant mountains on their way to the railroad shipping stations. Such a drove is kept well in hand by a number of herders, picturesquely garbed in sombreros, gray shirts and leather breeches called "chapps," each man being armed with revolver, bowie knife and a rawhide whip, and well mounted. If the drove of cattle has made a march of several hundred miles from the range, it will be pioneered by a large band of ponies, carrying camp equipage and supplies, and serving as remounts for the cow boys. These latter are usually brawny, clear-eyed fellows, civil enough to answer questions in spite of the fact that every fibre of both man and horse seems strained to its utmost tension in keeping the wilder and straying members of the drove within the bounds of the horned column.

**Grand Mountain Views.**—In passing up the valley, westward of Billings, there is a prospect from the car windows which combines more striking features of beauty and grandeur than could hardly be found elsewhere nearer than Switzerland. Beyond the smiling valley and the winding, glistening river, to the westward and southward, rise white, gigantic masses of mountains. These snowy ranges are so lofty, and, in some conditions of the atmosphere, so ethereal, that the surprise of an Eastern tourist, who had never seen high mountains before, was quite natural. Standing on the platform of a Pullman car, his eye caught the white, gleaming bulwark on the western horizon. "Conductor, those clouds look very much like mountains," he said. "Clouds; what clouds?" replied the conductor, looking around the clear blue sky. "Out there;



Driving Cattle from the Range to the Railroad.

just ahead of us." "Those are not clouds; they are the mountains at the head of the valley." "Good gracious!" exclaimed the traveler, who had got his conception of mountains from the Alleghanies or the Adirondacks. "Those white things way up in the sky mountains! Well, well, this is worth coming all the way from New York to see." Passing the unimportant station of *Carlton*, 18 miles west of Billings, the next stopping place is at

**Park City** (940 miles west of St. Paul; population, 250), at the head of the Clark's Fork bottom. Park City was settled in June, 1882. It is the centre of a large tract of agricultural land, the very last worthy of mention before the rough approaches to the Rocky Mountains are entered. Citadel Butte, three miles northeast of the town, commands from its summit, 400 feet above the plains, a fine view of the snowy peaks to the westward. Park City has an hotel, a school, and several stores.

**Stillwater** (957 miles from St. Paul).—This is an old trading post for Indians and hunters. The old Crow Indian Agency buildings are situated about twelve miles south of Stillwater. The agency has recently been removed to the Little Big Horn river, near Fort Custer. At this point the railroad crosses to the south side of the Yellowstone river, the bridge being known as the second crossing. *Merrill*, 966 miles from St. Paul, is a cattle shipping station. *Reed Point* and *Graycliff*, respectively 968 and 984 miles from St. Paul, are unimportant side tracks. *Dornix*, now called

**Big Timber** (998 miles from St. Paul).—This town is located near the mouth of Big Boulder creek, which flows into the Yellowstone from the south, and facing the mouth of Big Timber creek, which enters the river from the north. It has an hotel and a number of stores and shops, and a saw mill. An extensive grazing country in the valleys of the Big Boulder, the Yellowstone and the Big Timber, is tributary to this point.



**Piscatorial.**—The Yellowstone river, beyond its confluence with the Big Horn, flows with a strong current through a valley of varying breadth, and is fed by many beautiful mountain streams. Here trout are in abundance and give



Trout Fishing on the Big Boulder.

excellent sport. In passing over several hundred miles of the route in the autumn of 1882, before the railroad had got very far west of the Big Horn river, the writer had ample opportunity to indulge in the gentle pastime. The fish were plenti-



ful at every place of bivouac. On one occasion the Big Boulder river, a broad, clear, rushing stream, was reached half an hour in advance of the main party. Hastily putting a rod together, a cast of the fly was made, and the fish were found to be voracious. In forty minutes there were landed no less than seventeen beauties, several of which weighed two pounds each. This was done with due regard to sport. The tackle was delicate, and each fish had the chance to fight fairly for his liberty. Moreover, the fisherman was compelled to wade far out over the rough boulders in the river bed to reach his victims in their favorite haunt in a deep pool near the opposite shelving bank. This made it necessary to go back to the shore with each captive, after he was safe in the landing net, the passage being made over slippery rocks in a strong current, and consuming much of the time. Compared with its size, what tremendous power a two-pound trout exhibits after it detects its mistake in snapping the deceptive fly! There is nothing in the way of sport more exhilarating than to subdue this wild outburst of vigor.

**Springdale** (1,012 miles from St. Paul) is the station for Hunter's Hot Springs.

**Hunter's Springs.**—These celebrated hot springs are situated eighteen miles east of Livingston, at Springdale station, at the foot of the Crazy Mountains, on the north bank of the Yellowstone, one mile and three-quarters from the stream. They were noted for their wonderful healing virtues years before they became accessible by railroad, and, in fact, if the traditional reports of the aborigines may be credited, have been famous among all the Northern tribes from time immemorial. All the Indians in friendly relations with the Crows—within whose country the springs were situated until their reservation lines were fixed by the government—had for generations made pilgrimages to this natural sanitarium with their invalids, *pitching their teepees* around the fountains for the relief of their

sick, while their sore-backed ponies were healed by washing them in the healing waters below. Of course, the curative properties of the springs were the last hope for those at a great distance, whose afflictions had baffled the skill of their ablest "medicine men." No better proof than this of the healing properties of the water could be afforded, as the savage tribes acquire all their knowledge of the treatment of diseases from the experience of ages handed down from father to son. But there is abundant testimony, also, on the part of numbers of white men who have been restored to health by drinking and bathing in the water of these springs, that there was no superstition in the red man's faith in their remarkable curative powers. They are named Hunter's Springs in recognition of the fact that Dr. H. A. Hunter was the first white man to visit them and discover their medicinal qualities. The doctor, being in advance of the train with which he was traveling, and a mile north of its direct course,—his object in making the detour being to capture an antelope or deer for dinner,—was attracted to the springs by the cluster of Indian tepees which had been pitched around them. Eight or ten different tribes were represented in the concourse. He boldly rode into the promiscuous camp, and his friendly salutations were responded to in a spirit of equal friendliness. Being a physician, he perceived, by the bright iron-stains upon the rocks, the strong sulphur fumes of the ascending vapors, and the white soda and magnesia coating of the vegetation growing out of the sedimentary deposits, the medicinal value of the waters. He reached the spot in the early part of July, 1864, his train being one of the first that entered the then newly discovered gold mines of Montana by way of the Big Horn valley. Whoever may visit the now famous springs, and feast his eyes upon the beauties of the surrounding scenery, will not wonder that Dr. Hunter at once relinquished his bright hopes of winning fortune in the gold mines, and resolved, that, if any white man during

his lifetime should become possessed of these healing fountains, he himself should be that man. Dr. Hunter now enjoys the fruition of the hopes that inspired him nineteen years ago. The clay all around the springs is a blue, adhesive, argillaceous formation, thickly studded with pyritic iron, some of the cubes shining with a gold-like lustre; and in close proximity to the hot-water fountains there are copious springs, from which flow streams of pure water,—as cold in the hottest weather as ordinary ice water. But, valuable as his property is, Dr. Hunter has fully paid for it by the frequent risk of not only his own life, but of every member of his family. He moved his family to the springs in 1871, when marauding parties of Sioux Indians were constantly making raids throughout the country. For five long years, or until the year following the massacre of Custer and his command, the proprietor of the springs and his family were constantly “in the midst of alarms.”

Hunter's Springs are from 3,000 to 4,000 feet above the sea-level, and from fifty to 100 above the Yellowstone river. Their temperature ranges from 148° to 168° Fahrenheit, and they discharge at least 2,000 gallons a minute,—sufficient to accommodate all visitors, without the necessity of pumping. The water, hot or cold, is palatable, many who had used it while under treatment being regularly supplied with it by express, ordering it by the cask. The surrounding geological formations indicate that the springs have been flowing for many centuries. A chemical analysis shows sulphur to be the predominating constituent; but the water also contains magnesia, arsenic, iodine and lime.

The soil near Hunter's Springs is highly productive, being enriched with gypsum and other strong mineral fertilizers. Everything is produced in the gardens of this section that is cultivated in the States of Ohio, Indiana and Illinois. It is one of the best grazing localities in the



Yellowstone valley, the whole face of the country being heavily grassed.

Back in the bluffs, within easy walking distance of Hunter's Springs, there are still many antelope; while hares, ducks,



geese and other small game abound in the vicinity. Deer are occasionally "jumped up" in the groves in the Yellowstone, near the springs; and it is seldom that the sportsman walks far along its banks without having the opportunity to wing a



goose or duck. Elk are numerous in the mountains a few miles out. Few rivers are more thronged with trout than the Yellowstone. The angler must be unskillful indeed who fails to capture a handsome "string" in a couple of hours' fishing. The largest trout will weigh fully three pounds. Good coal has been found within two miles of Hunter's Springs; but the adjacent country has been only superficially prospected for minerals. Springdale station is about three miles from this place, and there is telephonic communication between the two points. Mails arrive and depart daily. Hacks are at the station on the arrival of every train to take tourists and invalids to the springs. There are distinct bath houses for the well and the sick, for male and female, and some of the tubs or tanks are large and deep enough for plunging and swimming. Visitors who prefer vapor baths are also accommodated; the medicated vapors, coming up freshly from the steaming waters, are regulated to any degree of temperature by cold-air jets.

Seven miles westward from Springdale is *Elton*, and five miles further is *Mission*, a new station, at which passenger trains do not stop.

**Livingston** (1,032 miles from St. Paul; population, 1,500).—This place is an important freight division and branch railroad terminus. It was founded in 1882. Here the main line makes its third and last crossing of the Yellowstone river, leaving the valley, along which it has run a distance of 340 miles westward from Glendive, and passing through the Bozeman Tunnel, in the Belt range of mountains, to the Gallatin valley beyond. The river at this point makes an abrupt turn, flowing from its sources in the mountains far to the southward, through the world-renowned region of the Yellowstone National Park. Three miles from Livingston the high mountains of the Yellowstone or Snow range open their portals just wide enough to allow the river an outlet, and through the cañon



Gate of the Mountains, near Livingston.

thus cut by the stream the branch railroad to the Yellowstone National Park is laid. Livingston is situated on a broad, sloping plateau, on the left bank of the Yellowstone river, directly at the foot of the Belt range. Large engine houses, machine and repairing shops, and other buildings for the use of the railroad, are situated here, on a scale only second in magnitude to those at Brainerd. Veins of fine bituminous coal have been opened eight miles distant, and ledges of good limestone are in the immediate neighborhood. The Clark's Fork mines, rich in silver, lie directly south, and the surrounding hills are occupied by cattle ranches. There is also much valuable mining territory on the Yellowstone river between Livingston and the northern boundary of the Northern Pacific. A number of mines are in successful operation. All these are items which combine to render Livingston an important point. Travel to the Yellowstone National Park must pass through Livingston, and a large business is done in furnishing supplies to tourists. Hotel accommodation has been already provided, and various extensive business enterprises have been established. Livingston is one of the most convenient places from which to leave for the Crazy Mountains and the country adjoining them, which are the favorite breeding grounds of the elk. There is fine trout fishing in the vicinity of the town. A semi-weekly stage runs to White Sulphur Springs and to the Neihart mines.

**Yellowstone National Park.**—The branch railroad to the Mammoth Hot Springs, leaving the main line of the Northern Pacific Railroad at Livingston, passes through the picturesque upper valley of the Yellowstone river to its terminus, fifty-one miles distant. It does not come within the plan of this volume to describe the remarkable features of the Yellowstone National Park. It is believed that the convenience of the tourist has been best regarded by



setting forth in detail the chief attractions of the Park in a separate book.\*

**Across the Belt Range.**—After leaving Livingston the railroad runs for twelve miles from the valley of the Yellowstone to the approach of the Bozeman Tunnel, on a grade of about 116 feet to the mile. The tunnel pierces the mountains a distance of 3,500 feet, at an elevation of 5,572 feet above the ocean. Some months before the completion of the work a short, steep-grade track was laid over the summit of the pass for temporary use. It is far more agreeable to ride over the mountain than through it, and there are glorious views in every direction. The train runs down the western slope in the wild defile of Rock Cañon, passing out into the broad, fertile valley of the West Gallatin, at Elliston, near the military post of Fort Ellis, twenty-two miles from Livingston. The scenery in Rock Cañon is remarkably grand and impressive. Enormous precipices of gray rock with castellated seams rise high above the dark forests which clothe the sides of the narrow ravine. The rocks have been worn by the action of the weather into many singular and fantastic shapes. At several places massive walls run up the mountain sides, so regular in their appearance that they seem to have been built by human hands.

*Hopper's Mine* and *West End* are unimportant stations on the eastern slope of the range.

**Timberline** (1,047 miles from St. Paul) is a busy coal mining town, with about 300 inhabitants. The mines furnish the railroad with coal, and also most of the Montana towns reached by rail.

**Bozeman** (1,057 miles from St. Paul; population, 3,000), the county seat of Gallatin county, is situated near the end of

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\* Tourists are recommended to obtain a "Mannual," for sale on the trains, descriptive of the Yellowstone National Park, profusely illustrated.



the Gallatin valley, at its narrowest point. North of the city the mountains are about three miles distant; but the range suddenly diverges in the same direction, and afterward the valley becomes twenty miles in width. Bozeman is the oldest established town on the line of the Northern Pacific Railroad in Montana, the town site having been laid out in July, 1864. In August of that year a well-known frontiersman, John Bozeman, reached the place in charge of a party of emigrants, who were so impressed with the beauty and fertile soil of the valley that they determined to go no further. The town was named in honor of this pioneer, who was murdered three years afterward by Indians in the Yellowstone valley. For the first year or two the growth of Bozeman was slow. In 1865 a mill was put in operation, and two years afterward Fort Ellis, situated two and a half miles east of the town, was established, and garrisoned by three companies of United States troops. The gradual increase of population in the Gallatin valley was soon evident, settlers coming in from the surrounding country, and making Bozeman their trading centre. The city presents a very attractive appearance with its many substantial brick structures, among which are business blocks, churches, two graded schools, and a fine court house, while on every side appear handsome residences, and neat, cozy cottages. Large mercantile establishments form a prominent feature. The city has also two flouring mills, two newspapers, two banking houses, four hotels, two planing mills, and sash and door factories. Excellent brick is manufactured and used in the construction of the buildings. Lumber is abundant and cheap.

Bozeman owes much of her solidity to her agricultural resources. The Gallatin valley is about thirty-one by twenty miles in extent, with a soil composed of a rich, dark vegetable mould. The scenery surrounding Bozeman is very picturesque. *Thermal Springs*, said to contain medicinal properties, are

within an hour's drive. Matthews' Hot Springs, with an hotel and bath house, are seven miles distant. Mystic Lake, twelve miles from the town, covers about eighty acres, and is a beautiful sheet of water. On the mountains around Mystic Lake, and in the vicinity of Bozeman, are forests of stately pines. Among the rivers in Gallatin county are the West Gallatin, Middle Fork and East Gallatin, the Madison, Yellowstone, Shield's river, Big and Little Timber, Sweet Grass, White Beaver, Kiser, Emigrant, Milk, Skull, Big and Little Boulder creeks, Stillwater, and many others of less importance. All these are stocked with trout and some other kinds of fish. Bozeman has remarkable advantages as a summer resort. The air is cool and invigorating. The mercury seldom goes up as high as 85°, and the nights are always cool. There are numerous pleasant drives in the vicinity, and interesting excursions are made to the wild cañons of the Bridger and Gallatin Mountains.

**The Bozeman Coal Fields.**—In the immediate vicinity of Bozeman, on the slopes of the Bridger and Belt Mountains, is an extensive field of bituminous coal, at which a number of mines have been opened. This field has been traced for a distance of thirty miles. The outcroppings are in the Bridger and Rocky Cañons, on the western slopes of the mountains; and also on Traill creek, on the eastern slope. The largest mining development is at Timberline, on the railroad, immediately west of the tunnel.

The Bozeman coal is a true bituminous coal, and not a lignite. The analysis shows about fifty-five per cent. of fixed carbon. There are three seams, the upper one being four and one-half feet thick, the middle one ten feet, and the lower seam sixteen feet. A good coke is made from this coal, and is used for the purpose of smelting ores. The coal is largely used for locomotive purposes, and also for domestic fuel in Bozeman, Helena, and other towns.

After leaving Bozeman, the railroad traverses the broad, level valleys watered by the East and West Gallatin rivers. Farming is carried on by irrigation, the gentle slope of the valley being very favorable for the construction and management of ditches. The average yield of wheat and oats on irrigated land is about double that raised on Eastern farms. *Belgrade* and *Central Park* (1,067 and 1,072 miles respectively from St. Paul) are unimportant side-track stations. *Moreland* (1,076 miles from St. Paul) has an hotel and two stores, and is surrounded by a rich agricultural and stock-raising country.

**Gallatin** (1,086 miles from St. Paul) has an hotel, and is the station for old Gallatin City, at the three forks of the Missouri, and for the new town of Three Forks, established by a number of enterprising English settlers in 1884. Gallatin City was formerly a commercial town of some importance, but is now merely a decayed hamlet of half a dozen buildings. Within a few hundred yards of this place there is a rocky elevation from which may be seen the meeting of the waters which form the Missouri river. The Madison and Jefferson unite about half a mile south of this promontory, and are joined by the Gallatin a short distance north of the rock. When Lewis and Clark ascended the Missouri river on their exploring expedition, in 1806, they were unable to determine which of the three streams should be regarded as the Missouri, and therefore concluded to give a separate name to each. Later explorations showed that the Jefferson was in reality the main river, being considerably longer than either of the other two streams, and carrying a larger volume of water. Lewis and Clark therefore robbed the Missouri of over 300 miles of its length, by confining its name to its course below the junction of the Three Forks. Shortly after leaving Gallatin, the railroad enters a savage gorge of weather-worn rocks, showing stains of iron and copper, and rising to the height of several





Three Forks of the Missouri,—Gallatin, Madison and Jefferson.



hundred feet above the track. On one side of the road runs the swift, clear current of the Missouri, and on the other, tower enormous precipices. The scenery in this cañon is among the finest on the whole line of the road. *Magpie* and *Painted Rock* (1,096 and 1,103 miles respectively from St. Paul) are side-track stations.

**Toston** (1,113 miles from St. Paul) is an agricultural town, at the head of what is known as the Missouri valley. This name is locally applied to a stretch of rich bottom lands, about thirty miles long, and from three to five in width. There is a ferry at Toston, which gives access to the valley of Crow creek, in which lies the old mining town of Radersburg, once a populous placer mining camp, but now having scarcely a hundred inhabitants.

**Townsend** (1,122 miles from St. Paul) has a good situation near the centre of the Missouri valley, and is a place of considerable trade. The upper and middle portions of the valley are irrigated from small streams running out of the defiles in the Belt Mountains, and the lower portion gets water from a ditch taken out of the Missouri. Townsend has two hotels, three general merchandise stores, two livery stables, agricultural implement establishments, a weekly newspaper, and drug and hardware stores. The town was established in 1883. There is a daily stage line to White Sulphur Springs, the county seat of Meagher county, forty miles distant, on the other side of the Belt Mountains. White Sulphur Springs has a population of about 500, and is an important trading point for a large district of grazing country. The springs are renowned in Montana for their curative properties, and are much visited by invalids. Good hotel accommodations can be had. The Neihart silver mines are also reached by stage from Townsend, a distance of sixty miles. These mines yield a high grade of silver ore.

Across the Missouri valley from Townsend, in a northeast-

erly direction, a series of deep gorges, or cañons, has been cut by the waters in the faces of the precipitous mountains. Crowning the summits of the first range skirting the valley is a gigantic ledge of lime rock. This ledge has been thrown up in places to a great height with almost vertical sides, which are partly smooth, partly seamed and gashed by ages of storms, and sometimes cut through from top to bottom by the streams, forming narrow gorges of fantastic shapes. Avalanche Cañon is of great note from its wild beauty and extensive and rich placer mines. This cañon received its name from the frequency of avalanches, or snow slides, which rush down its almost perpendicular sides in winter, sometimes completely filling the gorge. Hell Gate Cañon, about two miles westward, while having a peculiarly suggestive name, amply merits the appellation. Perhaps in no other accessible spot in Montana is there as much rugged beauty in so small a place. The cañon forms the tortuous passage of a silvery stream through a series of gates cut in very high walls. These gates are so narrow that a man can span their width with extended arms. The walls are only a few feet in thickness, but of a surprising height. On each side of the main gorge are smooth fissures, called Devil's Slides, and every nook is filled with bright mosses and lichens.

**Bedford** (1,125 miles from St. Paul) is an old mining town, with a small hotel and a few business houses. Some placer mining is carried on in the neighboring gulch. In the early days of mining in Montana, there were two placer camps near Bedford, with the singular names of "Hog'em" and "Cheat'em." *Placer* is a small station, 1,137 miles from St. Paul. *Clasol* (1,144 miles from St. Paul) is a small station on Bedford creek, a stream affording water for a narrow stretch of farming country.

**Prickly Pear Junction** (1,150 miles from St. Paul) is the point of divergence of the Helena & Jefferson County

Railroad, generally known as the "Wickes Branch," which runs to the important mining district of *Wickes*, on the eastern slope of the Rocky Mountains, twenty miles distant.





ROCKY MOUNTAIN DIVISION.

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HELENA TO HERON.—DISTANCE, 274 MILES.

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**Helena** (1,155 miles from St. Paul; population, 8,000).—This is the terminus of the Montana Division, and the beginning of the Rocky Mountain Division, of the railroad. Helena, the capital of Montana, is pleasantly situated at the eastern foot of the main chain of the Rocky Mountains, in latitude  $46^{\circ} 30' N.$ , and longitude  $112^{\circ} 4'$  west of Greenwich, on both sides of the famous Last Chance Gulch, from which at least ten millions of dollars' worth of nuggets and gold dust have been taken, and which still yields annually a considerable amount of the precious metal. So large was the influx of miners at this point in 1864, that the United States Government felt compelled to establish a postoffice for their accommodation. Until then the camp had been known as "Crab Town;" but a meeting was called for the purpose of selecting a better name, and the majority of those assembled decided upon christening it after Helen of Troy. The city is the commercial and financial centre of the Territory, and the converging point of all the stage, express and telegraph lines. It contains a public and also a Territorial library, a classical school, a graded public school, with fine school-houses in different parts of the city; a theatre, with seating capacity for 1,200 people; six churches, Episcopal, Roman Catholic, Baptist, Methodist North, Methodist South,





*The Gates of the Rocky Mountains, Missouri River, near Helena, Montana.*

and Presbyterian; and the United States Assay Office. There are four national banks, with over \$3,000,000 on deposit, a Board of Trade, a well-organized fire department, equipped with three engines and electric fire alarms; German singing and turner societies, an art club, a social club and a Masonic Temple, several good hotels, imposing business blocks, and many beautiful private residences. Pure, cold spring water is abundantly supplied from the surrounding mountains, and the streets are illuminated by electric lights. Foundries, saw, grist and planing mills, wagon factories and other industries are situated near the city; and there is telephone communication within the city, and also with Deer Lodge and Butte, and with the mining camps within a radius of fifty miles. Perfect drainage is insured by the fact that Helena lies on a long slope, at the foot of which spreads out the beautiful Prickly Pear valley, twenty-five miles long by twelve wide, oval in shape, and thickly studded with farms, the soil of which has produced 100 bushels of oats to the acre.

Helena is surrounded by mountains, rising one above the other until the more distant are lost among the clouds, forming a view of striking beauty and grandeur, which is visible from every part of the city. To the south and west these mountains recede in long, picturesque, timbered ridges, to the main range of the continental divide. The Missouri river is only twelve miles distant, and eighteen miles north of the city begins the famous cañon of the Missouri river, named by Lewis and Clark's expedition in 1805, "The Gates of the Rocky Mountains." Here the river has forced its way through a spur of the Belt Mountains, forming cliffs, frequently vertical, from 500 to 1,500 feet high, which rise from the water's edge for a distance of twelve miles. Near the lower end of this wonderful cañon, in plain view of Helena, thirty miles distant, is the jagged peak called by the Indians "The Bear's Tooth," rising abruptly from the river to a height of 2,500 feet, and

almost hanging over the head of the voyager as he floats down the stream.

To the left of this curious object a few miles, and breaking through the same range of stratified mountains, is the cañon of Little Prickly Pear creek, a magnificent chasm some fifteen miles long, with an endless variety of views of lofty cliffs crowned with pines, and romantic dells and gorges, where the cottonwood and the alder hang over deep, shady pools, in which hundreds of trout await their destiny in the shape of the man with a bamboo rod and book of flies. This cañon, with hotel accommodation at each end of it, is accessible by carriages, as well as by a stage line of "palace jerkies," which passes through it three times a week for Fort Benton. "The Gates of the Rocky Mountains" are reached either by carriages to the upper end of the cañon, or by boat through the cañon itself.

Among the other attractions of Helena are the Hot Springs, situated in a romantic glen, four miles west of the city, which are much resorted to by persons afflicted with rheumatism. The temperature of the water as it bubbles up from the earth varies from 110 to 140 degrees Fahrenheit.

About four miles southwest, at the head of Grizzly Gulch, is a group of rich quartz mines, and also some placer diggings, both of which have been extensively worked. There are here many quartz mills, and the drive from the city is through pleasant mountain scenery. Twenty miles to the northwest, over a fine road, are several mining districts, in which are some of the richest gold and silver mines in the Territory. These are worked by a number of large quartz mills, around which have grown up picturesque mountain villages that will amply repay the trouble of a visit. Twenty-five miles by rail to the southwest are the mining towns of Jefferson City, Wickes and Clancy, in the vicinity of which are a great number of rich and extensive silver mines. Fifteen miles west, at the head of Ten-Mile creek,

is a rich belt of silver mines. Thus Helena is surrounded on all sides by rich mining districts, which are in a great measure tributary to her. A railroad, called the Montana Central, is under construction (1886) from Helena to Great Falls, at the Falls of the Missouri.





## THE HELENA & JEFFERSON COUNTY BRANCH.

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This branch leaves the main line at Prickly Pear Junction, five miles south of Helena, and extends twenty miles in a western direction, along the valley of the Prickly Pear creek, up into the heart of the Rocky Mountains. It was built for the purpose of taking supplies to the mines and reduction works at Wickes, and hauling out their products. The maximum grade is 150 feet to the mile. The mountain scenery is really fine.

**Clancy** (14½ miles from Helena) is a small village with two stores and a blacksmith shop.

**Alhambra Springs** (17 miles from Helena) has an hotel, and hot mineral springs, with a plunge bath.

**Jefferson** (20 miles from Helena; population, 200) is an old mining town, once the centre of considerable trade, and was a large placer mining district, but is now almost entirely worked out. The place contains two hotels and a number of stores.

**Corbin** (22 miles from Helena) is the station for the concentrating works and the Alta, Montana and Rumley mines, about a mile distant on the mountain-side. The concentrating works have a capacity of 150 tons per day.

**Wickes** (25 miles from Helena; population, 500) is the terminus of the Branch Railroad. The reduction works of the *Helena Mining and Reduction Company* are located here. The

works contain both smelting and amalgamating plants, and their output of precious metals is about \$100,000 per month. They use the ores of the Comet, Northern Pacific, Alta-Montana and Rumley mines, belonging to the same company, and also the ores from more distant mines. The company employ in their mines and works about 500 men, and their monthly pay-rolls aggregate about \$50,000.



## HELENA, BOULDER VALLEY & BUTTE RAILROAD.

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This branch of the Northern Pacific system leaves the Helena and Jefferson county branch at Jefferson, 20 miles from Helena, and running up a narrow valley for a few miles, crosses a spur of the Rocky Mountains by a high grade line, showing some very bold and successful engineering work. It then descends into the Boulder valley to the town of

**Boulder** (37 miles from Helena)—the county seat of Jefferson county, which has a population of about 500. It is situated in a fine agricultural valley and is the central trading town for a number of productive silver mines. It has two hotels, a weekly newspaper, three churches, a court house and jail, and about a dozen general merchandise stores and shops. Four miles distant are the Boulder Hot Springs, where there is a good hotel and a bathing establishment, with a large plunge bath. Good accommodations for tourists and invalids. The waters are much used in cases of rheumatism.

From Boulder the railroad is now (1888) being constructed over the main divide of the Rocky Mountains to Butte, and will form a line between Helena and Butte about 25 miles shorter than the present route by way of Garrison. A railroad is also being built as a branch of the Northern Pacific system down the Boulder valley from Boulder to a junction with the Northern Pacific main line near Three Forks, with a branch to the Pony and Red Bluff mining districts.

## HELENA & RED MOUNTAIN AND HELENA & NORTHERN RAILROADS.

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FROM HELENA TO RIMINI.—DISTANCE, 17 MILES.

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This branch of the Northern Pacific system is a mining road, which leaves the main line at Helena, and terminates at Rimini, on the eastern slope of the main divide of the Rocky Mountains. The stations are *Kessler's*, *Thermal Springs*, *Gold Bar*, and *Rimini*, the latter being a central transportation point for the ores of the important group of mines.

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FROM HELENA TO MARYSVILLE, 20.4 MILES.

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This line runs in a northerly direction from Helena at the base of the Rocky Mountains, and ascends to the mining village of *Marysville*, population 500. The stations are Clough Junction and Cruse. There are many important mines near Marysville, the most productive of which is the famous Drum Lummon, which in 1887 yielded over \$2,000,000 of gold and silver.



## DRUMMOND & PHILPSBURG RAILROAD.

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FROM DRUMMOND TO PHILPSBURG.—DISTANCE, 25.7 MILES.

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This Northern Pacific branch leaves the main line at Drummond, 1,227 miles from St. Paul, and follows the agricultural valley of Flint creek up to the important town of

**Philpsburg**, population 700, the oldest silver mining town in Montana. It is situated in a verdant valley in the midst of grand mountain scenery. The oldest of the Montana silver mines is situated on a hill two miles distant, and the ore is crushed at a mill in the town. Many important mines are located within a radius of four or five miles from this place. Philpsburg has two hotels, a weekly newspaper, and an active business street.

Granite Mountain, population 300, is a village situated high up on the slope of a spur of the Rocky Mountains, three miles by a good road from Philpsburg. A number of productive mines are operated in the vicinity. Much the most important is the Granite Mountain mine, which is the most valuable silver mine in the world. During the three years ending July 1, 1887, it paid in dividends to its stockholders \$2,600,000.

## BITTER ROOT VALLEY RAILROAD.

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FROM MISSOULA TO VICTOR.—DISTANCE, 36 MILES.

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This is a new branch, built in 1887, from Missoula, on the Northern Pacific main line, 1,280 miles from St. Paul, up the picturesque and fertile valley of the Bitter Root river, as far as the new town of Victor, 36 miles, and to be extended about 40 miles further to the head of the valley. The Bitter Root is in some respects the best agricultural valley in Montana. It is lower by nearly 1,000 feet than the valleys near Helena, and has a much warmer climate. Apples and small fruits are successfully grown. There are some valuable mining properties in the mountain range on the western side of the valley. The streams abound in trout, and the mountains in large game, such as Rocky Mountain goats, elk, and bear.

**Tyler** (28 miles from Missoula) is the station for Stevensville on the opposite side of the river, a prosperous agricultural town, with a population of 300. Close to the town is the St. Mary's Mission, the oldest of the Jesuit missions in Montana. It was established by Italian priests nearly twenty years before there were any white settlers in the region. The old church, mill, and mission house are still standing.

**Victor** (36 miles from Missoula), is a new town created by the railroad, and has a population of 150. Silver mines and a fine agricultural country promise to make of it an important place.

## ROCKY MOUNTAIN DIVISION. MAIN LINE.

[Continued from page 271.]

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**Across the Main Divide.**—About twenty-one miles from Helena the main range of the Rocky Mountains is crossed by the railroad at the Mullan Pass, so named after Lieut. John Mullan, U. S. A., who in 1867 built a wagon road from Fort Benton, Mont., to Fort Walla Walla, W. T., thus bringing these distant military posts into direct communication. Here there is a tunnel 3,850 feet in length, and 5,547 feet above the level of the ocean, lower by more than 2,500 feet than the highest elevation of the Union Pacific Railroad, and 1,200 feet below the highest elevation on the line of the Central Pacific. The route from Helena to the Mullan Pass is through the charming valley of the Prickly Pear, across Ten-Mile creek, and up, past heavy growths of pine and spruce and masses of broken boulders, the narrow basin of Seven-Mile creek to the eastern portal of the tunnel. The scene from above reveals one of the most picturesque regions in Montana, in which mountain and valley, forest and stream, are all conspicuous features. Describing this region, Mr. E. V. Smalley wrote :

“Approached from the east, the Rocky Mountains seem well to deserve their name. Gigantic cliffs and buttresses of granite appear to bar the way and to forbid the traveler’s further progress. *There are depressions in the range, however, where ravines run*

up the slopes, and torrents come leaping down, fed by melting snows. Over one of these depressions Lieut. John Mullan built a wagon road a score of years ago, to serve the needs of army transportation between the head of navigation at the Great Falls of the Missouri and the posts in Oregon. Mullan's wisdom in selecting the pass, which bears his name, was indorsed when the railroad engineers found it to be the most favorable on the Northern Pacific line. The road is carried up ravines and across the face of foot-hills to a steep wall, where it dives into the mountain-side, runs under the crest of the Divide through a tunnel three-quarters of a mile long, and comes out upon smiling green and flowery meadows to follow a clear trout stream down to a river whose waters seek the mighty Columbia. The contrast between the western and eastern sides of the Main Divide of the Rockies is remarkable. On the eastern slope the landscapes are magnificently savage and sombre; on the western slope they have a pleasant pastoral beauty, and one might think himself in the hill country of western Pennsylvania, instead of high up on the side of the great water-shed of the continent. The forest tracts look like groves planted by a landscape gardener in some stately park, and the grassy slopes and valleys, covered with blue and yellow flowers, and traversed by swift, clear brooks, add to the pleasure-ground appearance of the country. What a glorious place this would be for summer camping, trout fishing, and shooting, is the thought of every traveler as he descends from the summit, with his hands full of flowers picked close to a snow-bank. Snow Shoe Mountain rises just in front, across a lovely, verdant valley. Powell's Peak, a massive white pyramid, cuts the clear sky with its sharp outlines on the further horizon, and a cool breeze blows straight from the Pacific Ocean."

Passing down the western slope, the descent is made to the valley of the Little Blackfoot river. This valley is open and well grassed, with cottonwood on the stream, and pine on the slopes of the hills. The river received its name from the Blackfeet Indians, who often passed down the valley to make their raids upon the settlers in Deer Lodge and Missoula counties.

There is good ruffed grouse shooting in the valley, and



also a great many blue grouse in the neighboring cañons. In October black-tailed deer are plentiful, and elk are also found in the mountains. Even a few bison manage to conceal themselves in the mountain fastnesses. Bear—black, grizzly and cinnamon—can be found.

**Frenchwoman's.**—The first station is at Frenchwoman's creek. The creek derives its name from the tragic fate which met a Frenchwoman who kept the stage station here many years ago. One morning she was found murdered, and some hundreds of dollars, which she had hoarded, were missing. Suspicion naturally fell upon the woman's husband, who disappeared at the time of the murder; but he was not captured, and brought to justice. The grave of the victim, inclosed by a wooden paling, is seen upon a grassy height, just above the house where the crime was committed, and serves as a pathetic reminder of the event.

Leaving Frenchwoman's, the route follows the winding valley of the Little Blackfoot by an easy down grade to the confluence of this stream with the Deer Lodge river.

The stations between Helena and the tunnel are *Birds-eye* and *Butler* (1,163 and 1,168 miles, respectively, from St. Paul).

**Elliston** (1,184 miles from St. Paul) is a coaling station for locomotives, situated in the picturesque valley of the Little Blackfoot river. Some farming is done in this valley in connection with stock-raising in the neighboring ranches. *Avon*, 1,193 miles from St. Paul, is an unimportant station.

**Garrison** (1,206 miles from St. Paul; population, 200), in the valley of the Deer Lodge river, is the junction of the Utah & Northern Railroad with the Northern Pacific. The Utah & Northern Railroad is a narrow-gauge line running in a southerly direction to Ogden, in Utah, and is a branch of the Union Pacific system. From Garrison to Butte and Anaconda it is *being widened* (1886) to accommodate the trains of the Northern

Pacific, and will be operated jointly by the two companies. Garrison was named in honor of William Lloyd Garrison, the eminent leader of the anti-slavery movement in the days before the civil war. It has an hotel and a few stores, and derives its importance chiefly from the transfer of freights and other railroad business.

**Deer Lodge** (1,218 miles from St. Paul; population, 1,200) derived its name from the abundance of deer that roamed over the broad, open prairie, and from a mound which, on a winter's morning, bore a resemblance to an Indian lodge when the steam issued from the hot spring on its summit. Deer Lodge is the seat of Deer Lodge county, and appears quite attractive, nestled midway in the valley, 4,546 feet above the sea. The town is well laid out, and, with its public square, large public buildings, court house, jail, churches and educational establishments, makes a good impression. There are three hotels, several wholesale and retail business houses, shops and a weekly newspaper. There is a Presbyterian college of Montana for both sexes, located here. This is the only college institution in Montana, and is the most important for high education in the Territory. There is also a Catholic school for the education of girls, conducted by the Sisters of Charity; and a hospital, under the charge of the same sisterhood, which is an excellent benevolent institution. The Montana penitentiary, located at Deer Lodge, is constructed with two wings, containing eighty-four cells. Deer Lodge has four churches, Catholic, Episcopal, Presbyterian and Christian. A handsome brick public school building has been erected at a cost of \$50,000. With these facilities, Deer Lodge is very properly the educational centre of Montana.

The town is a general supply and distributing point for several fertile valleys and the surrounding mining districts. Deer Lodge valley extends fifty miles southward, and is composed of farming and grazing lands. The latter rest on the

foot-hills and mountains, while the former are lower down, adjacent to the mouths of the streams. There are remarkable boiling springs in the valley. Many bright mountain trout streams course through its broad expanse, some having their sources eastward in the Gold Creek Mountains, and others coming from the west through the low, rolling, open country between the Deer Lodge and Flint creek valleys. Deer Lodge county is noted for the number, extent and richness of its placer mines, and for years it has led the production in placer gold. Among the surrounding mountains, Powell's Peak, twenty miles west of Deer Lodge City, and 10,000 feet in height, is prominent. There are many small lakes in the mountains, which are full of trout, and large game also abounds.

**Butte** (1,258 miles from St. Paul; population, 10,000) is situated near the head of Deer Lodge valley, and about fifteen miles west of the Pipestone Pass of the main range of the Rocky Mountains, on ground sloping to the south. It is the county seat of Silver Bow county, and is famous for its quartz mines, which are so largely developed as to make Butte the most important mining centre in Montana. In 1875 the first mill was constructed for working the silver ores of the camp, and the population did not exceed 200. To-day Butte City counts its inhabitants by thousands. Up to within a short time little foreign capital was invested in the mills and smelters of the camp; but it is now beginning to come in. The rapid growth of population and wealth in Butte has few parallels in the mining annals of the country, and the prospect is that within a few years the town will be the most productive mining centre in the United States. A peculiarity of the Butte mines is that, almost without exception, wherever a shaft has been sunk, it has paid a handsome profit over and above the cost of working. To the north of the town the ground rises 500 feet *higher to the Moulton, Alice and Lexington mines. Besides*



these mines, or lodes, there are many others, among which are the Shonbar, Bell, Parrott, Gagnon and Original. The veins are true fissures, yielding largely of copper and silver, and assaying well. It is estimated that there are over 300 miles of veins in the district, varying in width from thirty to fifty feet, and developed to a depth of 600 feet. A new smelter is in course of construction by one of the mining companies, which will have a capacity of smelting 500 tons daily. The city is substantially built with large business blocks and fine residences, which, together with its churches, school buildings and hotels, present an attractive appearance. Butte has two daily newspapers.

There are many other gold, silver and copper lodes in Silver Bow county which are more or less developed. At present the district embraces the principal mining region of Montana.

**Anaconda** (six miles from Butte) is a town created by the operations of the Anaconda mines and reduction works. The Anaconda is one of the most productive copper and silver mines in the world; and a populous community, closely allied in its business to the neighboring town of Butte, is growing up here.

**From Garrison Westward.**—After leaving Garrison, there are fine views of mountain scenery, especially on the left hand, where the snow-mantled peaks of Mount Powell appear. The railroad passes along near the Deer Lodge river, which skirts the heights to the right. The entire region is noted for the richness and extent of its placer mines. Some distance southward are the Gold Hill Mountains, where the diggings are still profitable; and the valleys of Rock, Willow and Squaw creeks, streams which flow into the Deer Lodge, have also produced large quantities of fine gold.

Below the mouth of the Little Blackfoot, Deer Lodge river changes its name to Hell Gate river. The valley here rather



abruptly narrows, its breadth for seven or eight miles scarcely exceeding a single mile, with mountains on the right hand and bold bluffs on the left; but it again becomes broader where the waters of Flint creek flow from the south and swell the volume of the river. *Lloyd* (1,207 miles from St. Paul) is an unimportant station.

**Gold Creek** (1,215 miles from St. Paul) is the station for the old mining town of Pioneer, about three miles distant. On Gold creek the first discovery of gold within the present limits of Montana was made in 1862. At the mouth of the stream there are enormous bars of gravel and boulders produced by the hydraulic and sluice washings in the regions above. There is still some placer mining done on this creek.

**Drummond** (1,227 miles from St. Paul; population, 300) is the station for Phillipsburg, 28 miles distant, an old and still prosperous mining town in the Flint creek valley. Phillipsburg has smelting works, and considerable sluice and hydraulic mining is done in the neighborhood. Flint creek valley is a pretty agricultural valley, with numerous farms and cattle ranches. New Chicago, on the road to Phillipsburg, is a small trading town within sight of Drummond. In Drummond there are two hotels, a livery stable, and a number of stores.

**Bear Mouth** (1,239 miles from St. Paul) was formerly a station on the stage road between Deer Lodge and Missoula, and is now a shipping point for a small extent of farming and cattle country.

A short distance below Bear Mouth the Hell Gate Cañon is entered. This is, however, no narrow mountain pass, as its name would indicate, but, rather, a valley from two to three miles in width, extending a distance of forty miles to the junction of the Hell Gate river with the Big Blackfoot, after which it widens to unite with the valley of the Bitter Root, whereon *Missoula* stands. The scenery along the Hell Gate Cañon is



Beaver Hill, Hell Gate Canon. near Missoula, Montana.

very fine, often grand. Rock-ribbed mountains rise on either hand, their slopes black with noble specimens of yellow pine, and flecked in autumn with the bright gold of giant tamaracks. The stream itself is deep and swift, quite clear also, except where it receives the murky waters of its many tributaries, which latter in summer are always coffee-colored from the labors of the gold-washers in the mountains. Many islands covered with cottonwood and other deciduous growths, lie in the crooked channel, adding to the general picturesqueness. Two-thirds of the way down the cañon, Stony creek, a fine, bold mountain stream, enters from the southwest, after flowing eighty miles through the range between the Deer Lodge and Bitter Root valleys. The water teems with trout. The Big Blackfoot, Hell Gate's largest tributary, comes in from the east, with a valley eighty miles long and varying from half a mile to twelve miles in width, considered one of the finest grazing and agricultural sections in Montana. Many good quartz and galena leads have been discovered in the mountains, and the Wallace district, near Baker station, is especially promising.

There are five large saw-mills in the Hell Gate Cañon, belonging to the Montana Improvement Company, which obtain their logs from the cañon itself and from the neighboring mountains. The principal market for the lumber is in Butte, where it is in demand, not only for building purposes, but in large quantities for supports to roofs of the mines. *Carlan*, *Bonita*, *Wallace* and *Turah* (1,247, 1,255, 1,263 and 1,269 miles respectively from St. Paul) are unimportant stations.

**Beaver Hill—A Legend.**—In traveling between Deer Lodge and Missoula, twenty-eight miles from the latter place, at Kramer's Ranch, a remarkable ridge or tongue of land is seen stretching across the valley of the Hell Gate river from the east side, almost in the form of a beaver *couchant*. It is



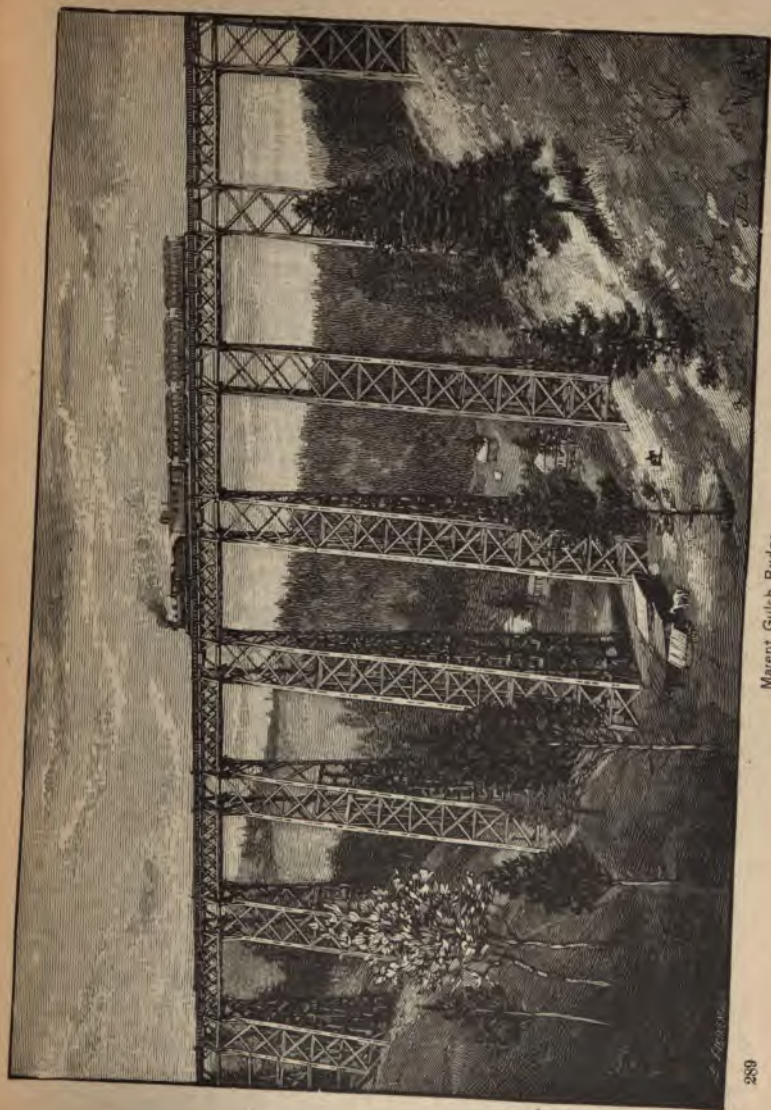
known as Beaver Hill, and it projects so near to the mountains on the west side of the valley as to nearly dam up the river, which is here compressed into a narrow, rocky channel. There is a legend connected with this hill, which is about as follows:

A great many years ago, before the country was inhabited by men, the valleys along the whole length of the river and its branches were occupied by vast numbers of beavers. There was a great king of all the beavers, named Skookum (which in Indian means "good"), who lived in a splendid winter palace up at the Big Warm Spring Mound, whereon the Territorial Insane Asylum is now situated. One day the king received word that his subjects down the river had refused to obey his authority, and were going to set up an independent government. In great haste he collected a large army of beavers, detachments joining him from every tributary on the way down. On arriving at the great plain now crossed by Beaver Hill, he halted his army, and demanded of the rebels that they pay their accustomed tribute and renew their allegiance. This they insultingly refused to do, saying they owned the river below to the sea, that it was larger and longer than that above; and, as they were more numerous, they would pay tribute to no one. The old king was able and wily, and immediately sent for every beaver under his jurisdiction. When all had arrived he held a council of war, and said, that, as he owned the sources of the great river, he would dam it at that point, and turn the channel across to the Missouri. This would bring the rebels to terms below, because they could not live without water. He so disposed his army that in one night they scooped out the great gulch that now comes in on the north side of Beaver Hill, and with the earth taken out the hill was formed in a night, and so completely dammed up the river that not a drop of water could get through. When the rebellious beavers below saw the water run by and the river bed dry up, they has-



tened to make peace, paid their tribute (internal revenue tax, perhaps), and renewed their former allegiance. So King Skookum had the west end of the dam removed, and ever since that time the river has run "unvexed to the sea." To commemorate the event, he had the earth piled up on top of the hill to resemble a beaver in form, and it can be seen either up or down the river a long way. The Indians who first settled up the valley got this legend from the beavers, their cousins, more than a thousand years ago; for in those ancient times they could converse together, and did hold communication until some young and treacherous Indians made war on the beavers for their furs, when the beavers solemnly resolved never to converse with them again, and have steadfastly kept their word.

**Missoula** (1,280 miles from St. Paul; population, 1,500) is the county seat of Missoula county. It is beautifully situated at the western gateway of the Rocky Mountains, on a broad plateau on the north side of the Missoula river, near its junction with the Bitter Root and the Hell Gate, and commands a lovely view of the valley and the surrounding mountain ranges, that stretch away as far as the eye can see. This town used to be as isolated and remote a frontier post as could be found in the Northwest; but the railroad has converted it into a stirring place. It contains three churches, a national bank, two weekly newspapers, a large and handsome public school building; a female seminary, conducted by the Sisters of Charity, which occupies a new and spacious brick structure; a hospital, also under the charge of the same sisterhood, and also a sanitarium of the Western Division of the Northern Pacific Railroad, conducted on the same plan as the sanitarium at Brainerd, Minn., which takes charge of sick and injured employes on the Eastern Division of the road. It has many attractive and substantial business blocks and residences. There are also a flouring mill and saw mills. Missoula will be an important point on the



Marent Gulch Bridge,

railroad. The fertile lands of the plain near by, and the large and rich valley of the Bitter Root, already well settled, over eighty miles long, with an average width of about seven miles, besides other agricultural districts to the northward, all make a lively trade. The altitude of this region is about 3,000 feet. The climate is not as cold as in a similar latitude east of the Rocky Mountains, and the soil produces readily a great variety of cereals, fruits and vegetables.

The country surrounding Missoula has been the scene of many fierce conflicts between the Indians. Before the whites inhabited the Territory the Blackfeet Indians ambushed Chief Coriacan, of the Flatheads, in a defile fourteen miles north of the city, with a portion of his tribe, and massacred nearly every man. A few years later the Flatheads avenged their chief's death by killing a like number of Blackfeet in the same defile, which now bears Coriacan's name.

Missoula county embraces the large and fertile valleys of the Bitter Root and Jocko. The county is heavily timbered, and is rich in mineral and grazing lands. It contains also many beautiful lakes, well stocked with fish, and frequented by water fowl. Good trout fishing, as well as various other kinds, is obtained in the Missoula, the Bitter Root, Jocko, Lo-Lo, Flathead, Big Blackfoot and Pend d'Oreille rivers, and in Stony and Ashley creeks. The mountain goat is in abundance, and can be found in the vicinity.

Fort Missoula, a garrison of the U. S. troops, is pleasantly situated about half an hour's drive from the town in the Bitter Root valley.

Leaving Missoula, the railroad passes westward across the northern edge of the plain, over a low and well-timbered divide, which separates the waters of the Missoula river (the continuation of the Hell Gate) from those which drain into the Flathead. Fourteen miles from Missoula the road enters the Coriacan Defile, and crosses the Marent Gulch by means of an



iron bridge 866 feet in length and 226 feet in height. The Cori-  
acan Defile is surmounted by a grade of 116 feet to the mile, the  
whole length of the heavy grade being thirteen miles, ascending  
and descending. The track follows no valley, but proceeds  
along the faces of hills, which are covered with fir, pine and  
tamarack, down into the valley of the Jocko river, where the  
agency of the Flathead Indians is established.

The stations between Missoula and the summit of the Coria-  
can Defile are *De Smet* (1,286 miles from St. Paul), *Evaro*  
(1,296 miles from St. Paul), at the foot of the steep grade going  
westward; and *Arlee* (1,307 miles from St. Paul), named in  
honor of the chief of the Flatheads. The agency buildings are  
in sight, about five miles distant, at the foot of the Mission  
Mountains.

**The Flathead Indian Reservation.**—This reservation  
extends along the Jocko and Pend d'Oreille rivers a distance  
of sixty miles. It contains about 1,500,000 acres, which, if  
divided among the 1,200 Flathead, Pend d'Oreille and half-breed  
Indians who hold the tract, would give 5,000 acres to each  
family of four persons. A large part of the reservation con-  
sists of a mountainous area, with a growth of valuable timber;  
but there is also a fair quantity of fine grazing land, as well as  
many well-sheltered, arable valleys. Mr. E. V. Smalley visited  
the reservation in the summer of 1882, and gave the result of  
his observations in the *Century Magazine* for October of that  
year as follows:

“The Flathead Agency is under the control of the Catholic  
church, which supports a Jesuit mission upon it, and has con-  
verted all of the inhabitants to at least a nominal adhesion to  
its faith. At the mission are excellent schools for girls and  
boys, a church, a convent and a printing office, which has  
turned out, among other works, a very creditable dictionary of  
the Kalispel or Flathead language. The agent, Major Ronan,  
has been in office over five years, and, with the aid of the  
Jesuit fathers, has been remarkably successful in educating the



Indians up to the point of living in log houses, fencing fields, cultivating little patches of grain and potatoes, and keeping cattle and horses. The government supplies plows and wagons, and runs a saw mill, grist mill, blacksmith shop and threshing machine for their free use. There is no regular issue of food or clothing; but the old and the sick receive blankets, sugar and flour. Probably nine-tenths of those Indians are self-sustaining. Some persist in leading a vagabond life, wandering about the country; but these manage to pick up a living by hunting, fishing, and digging roots, and sell ponies enough to buy blankets, tobacco and powder. But even the best civilized, who own comfortable little houses, with plank doors and porcelain door knobs, got from the government, like to keep their canvas lodges pitched, and prefer to sleep in them in summer time. Farming is limited to a few acres for each family; but herding is carried on rather extensively. Thousands of sleek cattle and fine horses feed upon the bunch pastures along the Jocko and the Pend d'Oreille, on the Big Camas prairie, and by the shores of Flathead Lake.

\* \* \* Probably there is no better example of a tribe being brought out of savagery in one generation than is afforded by the Flatheads, and their cousins, the Pend d'Oreilles. Much of the credit for this achievement is, no doubt, due the Jesuit fathers, who, like all the Catholic religious orders, show a faculty for gaining an ascendancy over the minds of savages, partly by winning their confidence by devoting themselves to their interests, and partly, it may be, by offering them a religion that appeals strongly to the senses and superstitions. These Indians boast that their tribe never killed a white man. They are an inoffensive, child-like people, and are easily kept in order by the agent, aided by a few native policemen. Life and property are as secure among them as in most civilized communities. With them the agency system amounts only to a paternal supervision, providing implements and machinery for husbandry, and giving aid only when urgently needed. It does not, as upon many reservations, undertake the support of the tribe by issuing rations and clothing. Instead of surrounding the agency with a horde of lazy beggars, it distributes the Indians over the reservation, and encourages them to labor. It ought to result in citizenship and separate ownership of the *land for the Indians*. Many of them would now like deeds to the

farms they occupy; but they can not get them without legislation from Congress changing the present Indian policy. Practically, they control their farms and herds as individual property; but they have no sense of secure ownership, and no legal rights as against their agent or the chief. Some of them complain of the tyranny of the native police, and of the practice of cruelly whipping women when accused by their husbands of a breach of marriage vows,—a practice established, it is charged, by the Jesuits; but in the main they seem to be contented and fairly prosperous. Among them are many half-breeds who trace their ancestry on one side to Hudson's Bay Company servants or French Canadians,—fine-looking men and handsome women these, as a rule. They are proud of the white blood in their veins, and appear to be respected in the tribe on account of it; or perhaps it is their superior intelligence which gains for them the influence they evidently enjoy. Shiftless white men, drifting about the country, frequently attempt to settle in the reservation and get a footing there by marrying squaws; but they are not allowed to remain. The Indians do not object to their company so much as the agent."

Flathead Lake, a magnificent sheet of water, twenty-five miles long and six miles wide, is situated on the reservation. The fertile lands about the lake shores are occupied by Indians, whose farming operations are well conducted. The lake is noted for its picturesque scenery. Wooded islands dot its waters, and large, landlocked salmon live in its crystal depths. The Flathead or Pend d'Oreille river issues from the lake, and flows with strong current, and with a fall of fifteen feet at one point in its course, to its junction with the Jocko, thirty miles below. Near the Mission of St. Ignatius are the cascades known as the "Two Sisters," a visit to which Gen. Thomas Francis Meagher, acting Governor of Montana, who was drowned at Fort Benton in 1867, eloquently described. He wrote:

"Topping a low range of naked hills, we had a sight which made the plastic heart of the writer dilate and beat and bound and burn with rapture. Beyond there, walling up the horizon,



were the Rocky Mountains, rearing themselves abruptly from the plains and valleys,—no foot-hills, no great stretches of forest, to detract from the magnificent stature with which they arose and displayed themselves unequivocally, with their bold and broken crests, with their deep and black recesses, with their borders of white cloud in all their massiveness and stern, cold majesty, in the purple light of a midsummer evening, the calmness and the glory of which were in full consonance with the dumb, gigantic features of the scene. Right opposite, leaping and thundering down the wall of a vast amphitheatre that had been scooped out of the mountains, was a torrent, bounding into the chasm from a height of fully two thousand feet, but looking as though it were a bank of snow lodged in some deep groove, so utterly void of life and voice did it appear in the mute distance. A mass of trees blocked the bottom of the amphitheatre; and following the torrent which escaped from it after that leap of two thousand feet, thousands and tens of thousands of trees seamed the valley with a dark green belt, all over which the hot sun played in infinite reflections and a haze of splendor. The path to this chasm lies through a dense wood, the beautiful and slender trees in which are closely knitted together with shrubs and briers and snake-like vines; while vast quantities of dead timber and immense rocks, slippery with moss, and trickling streams, thin and bright as silver threads, encumber the ground and render it difficult and sore to travel. There are few tracks there of wild animals, and all traces of the human foot are blotted out, so rarely is that solitude visited even by the Indian.

“As we neared the foot of the Elizabeth Cascade,—for such was the name given to the headlong torrent,—great was our surprise to find another torrent equally precipitous, but still more beautifully fashioned, bounding from the edge of the opposite wall; and, as a jutting rock, sceptred with two green trees of exquisite shape and foliage, dispersed its volume, the torrent spread itself into a broad sheet of delicate foam and spray, white and soft, and as full of light and lustre as the finest lace-work the harvest moon could weave upon calm waters. This cascade is completely hid from view until one stands close under it, and the fathers of the mission, strange to say, knew nothing of it until our explorers told *them exultingly* of their discovery. To this they gave the

name of the Alice Cascade, christening them both the Two Sisters."

**Ravalli** (1,317 miles from St. Paul) is the station for the Saint Ignatius Mission. It was named in honor of Father Ravalli, an eminent philanthropic missionary who labored among the Flatheads and their allied tribes for about forty years, and died in 1884. The Saint Ignatius Mission, six miles from the station, is, with the exception of the Saint Mary's of the Bitter Root valley, the oldest Catholic mission in the northern Rocky Mountain region. It was established in 1854. It consists of a church, a school for girls, a school for boys, a dwelling for the missionary fathers, and numerous shops and mills.

Mission valley is one of the loveliest in Montana, and is well worthy the attention of tourists. The Mission Mountains, which bound it on the east, are unsurpassed for grandeur of scenery in the entire Rocky Mountain chain. They contain numerous cañons and water-falls. Flathead Lake is easily reached from the mission by a drive of about thirty miles over a good road.

The railroad follows the beautiful valley of the Jocko river to its confluence with the Flathead, forty-four miles from Missoula. The Flathead for the next twenty-five miles, until its waters are united with those of the Missouri, is now called the Pend d'Oreille river. Keeping along the left or southern bank of this stream for seventeen miles, the road sweeps around a grand curve, and crosses to the right bank over a fine truss bridge, which, with its approaches, is about 800 feet long. Eight miles beyond the crossing, the muddy waters of the Missoula, pouring in from the south, mix with the bright flood of the Pend d'Oreille, and the united streams now take the designation Clark's Fork of the Columbia. This name is retained, except where the river widens out into Lake Pend d'Oreille, 100 miles westward, until the waters mingle with those of the Columbia river, in the British Possessions, northward.



*Jocko, Duncan, Perma and Victor* (1,324, 1,331, 1,339 and 1,345 miles respectively from St. Paul) are unimportant stations.

**Paradise Valley and Horse Plains.**—Two small and charming valleys soon appear to vary the fine mountain views. They are Paradise valley and Horse Plains, both celebrated among the Indians as wintering places for their ponies. Paradise valley is seven miles westward of the junction of the rivers. It is two by four miles in extent, and well deserves its name. Six miles beyond is Horse Plains, a circular prairie, six miles across, containing a township of fertile land, situated in the midst of very wild scenery. High mountains stand around, and lend the warmth of spring, while their own sides are white with snows. These valleys are the only spots on the immediate line of the railroad for over a hundred and fifty miles that invite cultivation. The oldest inhabitant of this region is one Neptune Lynch. He drifted hither almost twenty years ago, and was content to own a few cows and let them roam the wilderness. The small herd of sixty cows grew and thrived. They summered in the mountains, and wintered in the valleys, where snow seldom falls over four inches in depth. Lynch's stock, which roam for a hundred miles, have made him and his sons rich. The land of Horse Plains produces everything desirable in a northern latitude, under irrigation; but in some seasons irrigation is not needed.

Leaving Horse Plains, and crossing Clark's creek, with Lynch's Buttes visible to the right, the railroad continues westward along the right bank of the river through an unbroken mountain region; which affords magnificent views at every turn. The mountains tower on either side. There is no bench land, much less any fertile bottoms, though sometimes level spots of a few acres are heavily timbered. Room is not always found for the track, which is often blasted out from the points of the hills. The grand surroundings of the route at times produce remarkable effects.



Thompson's Falls, Clark's Fork of the Columbia, Montana.

*Weeksville, Eddy and Woodlin* (1,365, 1,372 and 1,378 miles respectively from St. Paul) are side-track stations for railroad operations.

*Thompson River* station, thirteen miles from Kitchen's, and a mile or so west of the point where the track crosses that stream, is placed on a plateau which is planted by nature with scattering pines, and surrounded by a grand cordon of mountains. For several miles here the scenery is very fine, equal to any views to be seen upon the road.

**Thompson's Falls** (1,382 miles from St. Paul; population, 300) is beautifully located at the falls of the Clark's Fork river, and is a point of departure from the east for the Cœur d'Alène mining district, distant about forty miles on the other side of the Bitter Root Mountains. Thompson's Falls has two hotels, a livery stable and a number of mercantile houses, one of which does a wholesale business. The river furnishes a remarkable water-power, which has not yet (1886) been utilized.

**The Cœur d'Alène Mines.**—Placer gold was discovered in 1883 on Prichard creek, a tributary of the Cœur d'Alène river. Early in 1884, there was a remarkable movement of miners, tradesmen and adventurers, to this hitherto wilderness region. What is called in mining camps a "stampede" took place. From two to three thousand people made their way through the depths of the forests during February and March to the valley of the Cœur d'Alène, and its tributaries, dragging their supplies with them on toboggan sleds. A number of camps were speedily established, and the development of the region began; but, owing to the fact that the gold was found in soil from six to twelve feet deep, with gravel and boulders, the development was slow. Many of the first comers were forced to leave for want of means to open claims. The district has, however, made steady progress, and now yields a large and constantly increasing amount of gold. Murray, the principal town



of the region, has a population of about 800, two semi-weekly newspapers, a bank and numerous stores. There are a number of similar towns on Prichard, Beaver and Eagle creeks. A wagon road extends from Thompson's Falls to Murray; but the mountain pass is so steep that most of the transportation across it has been by pack animals. There is another route to the mines from the West, leaving the railroad at Rathdrum, Idaho, whence there is a stage road to Cœur d'Alène City, seven miles. From this point, a steamboat runs on Cœur d'Alène Lake and river for a distance of about seventy-five miles, and connection is made by teams and pack animals for the mining towns. Supplies are also hauled up the Cœur d'Alène river, from the head of steamboat navigation, in batteaux. The Cœur d'Alène district lies on the slopes of the Beaver and Cœur d'Alène Mountains, and the entire region is covered with a forest of white pine, spruce, fir, tamarack and cedar. The cedar trees attain a remarkable size, and are probably unequaled for height and girth by any species in the United States. *Wardner*, on the South Fork, has a smelter, and a population of 500.

**Grand Scenery.**—Everywhere along the Clark's Fork of the Columbia there is magnificent scenery. Cottonwood grows close to the river, and firs and pines clothe the benches and mountain-sides, except where the latter are so nearly vertical that forests can not grow. Magnificent vistas are presented as the train moves along, changing and wearing new forms at every turn. The mountains are conical, and sometimes vertical, as where the river has cut through them with tremendous force. The constant succession of towering hills, grouped in wild array, is never wearying, and is sometimes startling in effect, as when some tributary from the north or south tears its way to the greater stream, and offers a vista, reaching far through the deep-worn cañon or ravine, along which the heights are ranged as far as eye can see. One of the



most striking of these side effects is where Thompson's river comes in from the north, and you look up the long and sharp ravine to catch a momentary glimpse, from the trestle bridge, of the foaming water-fall and the heights that wall it in.



Along the Clark's Fork.

**Views on the Clark's Fork.**—Reaching the second crossing of the Clark's Fork, there is seen a navigable stretch of water that was utilized by placing a small steamer on it at the time the railroad was under construction. East of the

second crossing, the mountains close in upon the view, often abruptly. West of it the valley widens. There is no land to style it a valley; but the gorge is wider and the river less turbulent. The scenery has the same features, but in rather quieter lines, as the heights do not crowd the river so much. The road is now on the south side of the stream. West of Second Crossing, about ten miles, the track follows a high bench, and a view is shown of the river where its waters have cut a deep channel far below. Mountains on the north stand imminent, and make a striking picture.

**Good Hunting and Fishing.**—Another feature of this mountain region, which is likely to attract the attention of lovers of sport, is that abundance of game is found among all the ranges. There is no other region that can surpass it for the presence of wild and game animals, as well as birds and fish. Bears are very common; elk, caribou or moose haunt these mountains, and deer of various kinds abound. There are many of the fur-bearing animals, such as otter, beaver and mink; while grouse, pheasants, ducks, geese and other fowl are plentiful in their season. The waters abound in the finest trout of various varieties, from the little speckled beauties of the mountain rills to the great salmon trout found in the larger streams and lakes.

After coursing along the northern and southern banks of the Clark's Fork of the Columbia for a hundred miles, the views of mountain and forest sometimes broadening, sometimes narrowing, and the river alternately showing a wooded reach of smooth water and a stretch of tumbling breakers, the mountains again crowd together near Cabinet Landing. The stations on the next thirty-seven miles after passing Thompson's Falls are *Belknap*, *White Pine*, *Trout Creek*, *Tuscor* and *Noxon*. These stations are either for the convenience of the railroad employes or for the shipment of lumber, and in every other aspect are at present of not sufficient importance to be described. Belknap was for

a short time an important shipping point for the Cœur d'Alène mines, but was destroyed by fires in 1884, and has not been rebuilt. At several points on the line the track is carried across lateral streams by massive trestle bridges, the one over the deep gorge of Beaver creek being especially noticeable from its height and graceful curve. These frequent bridges, as well as many deep cuttings through the spurs of the mountains, attest the difficulties which the engineers were required to surmount in constructing the line.



## IDAHO.

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The Northern Pacific Railroad passes over a very narrow strip of northern Idaho,—scarcely a degree of longitude,—between the eastern end of Lake Pend d'Oreille, and to a point near Spokane Falls, W. T. Idaho is bounded on the east and northeast by Montana and Wyoming, from which Territories it is separated by the winding chain of the Bitter Root or Cœur d'Alène Mountains. On the south it follows the forty-second parallel along the line of Utah and Nevada. On the west lie Oregon and Washington, and on the north the British Possessions. Idaho is embraced between the forty-second and forty-ninth parallels of latitude, and between the 111th and 117th meridians of longitude, west of Greenwich. Its area is 86,294 square miles, or 55,228,160 acres. The northern part of the Territory is quite mountainous, some of the highest altitudes reaching 10,000 feet. Mountain and valley alike are covered with a dense growth of coniferæ. The principal ranges are the Bitter Root and the Salmon Mountains, the latter traversing the central portion of the Territory. South of this mountain range, stretching nearly across the Territory, is the Snake river plain, the surface of which is either level or gently undulating. Still further south is an elevated plateau, which merges in the southwest into an alkaline desert. Idaho is, on the whole, well watered. Its principal stream is the Snake or Lewis Fork of the Columbia, which, with its many affluents, drains about five-sixths of the Territory. This stream, generally confined within high walls



of basalt, pursues a tortuous and tumultuous course, from its sources in Wyoming, of about 1,000 miles, interrupted by many falls of considerable height. It is only navigable from a short distance above Lewiston, near which city it leaves the Territory, to its junction with the Columbia river, at Ainsworth, less than 100 miles distant. The principal tributaries of the Snake river are the Salmon, the Boisé, the Owyhee and the Clearwater, the Salmon river draining the central part of the Territory.

The arable lands of Idaho are estimated at ten per cent. of its area. There are fine small valleys in the northern part on all the streams flowing into the Snake river from the east, with an abundance of water. In the south there are also good valleys which could be cultivated by irrigation. The grazing lands of Idaho cover a great area, especially in the southern part of the Territory. All the level country of the Snake river plains is valuable for pasturage, as well as the mountain ranges to the south and southeast, which are covered with bunch grass.

The Territory was organized in 1863, having been cut off from Oregon, although a part of it was subsequently given to Montana. The mineral resources of the Territory are very great; but as yet they have been only slightly developed. The principal yield has been from the placers along the Snake and other rivers, which has amounted to about \$75,000,000 since operations were begun. There was no railroad in Idaho before 1880, at which date the Utah & Northern narrow-gauge railroad ran its line through the southeastern part, and has since extended its system to Montana. The Oregon Short Line, a branch of the Union Pacific Railroad, diverging from Granger, in Wyoming, meets the Oregon Railway & Navigation Company's system at Huntington, on Snake river. The gradual failure of placer mining has very much stimulated *the prospecting* for lodes of gold and silver, and valuable

discoveries of these metals have been made in all the mountain ranges, requiring only better transportation facilities for their development.

The population of Idaho is estimated to be near 75,000, exclusive of the Indians, who number about 5,000. These Indians consist of the Nez Percés, Bannacks and Shoshones. The former, numbering 2,807, have a reservation of 1,344,000 acres on the Clearwater, near Lewiston, toward the northern part of the Territory. The two latter tribes, numbering 1,500, jointly occupy a reservation of 18,000 acres in the southeastern part of the Territory, on the Snake and Portneuf rivers. There is also a reservation near Lemhi, in the Salmon River Mountains, where 677 Indians are reported as having their homes.



IDAHO DIVISION.

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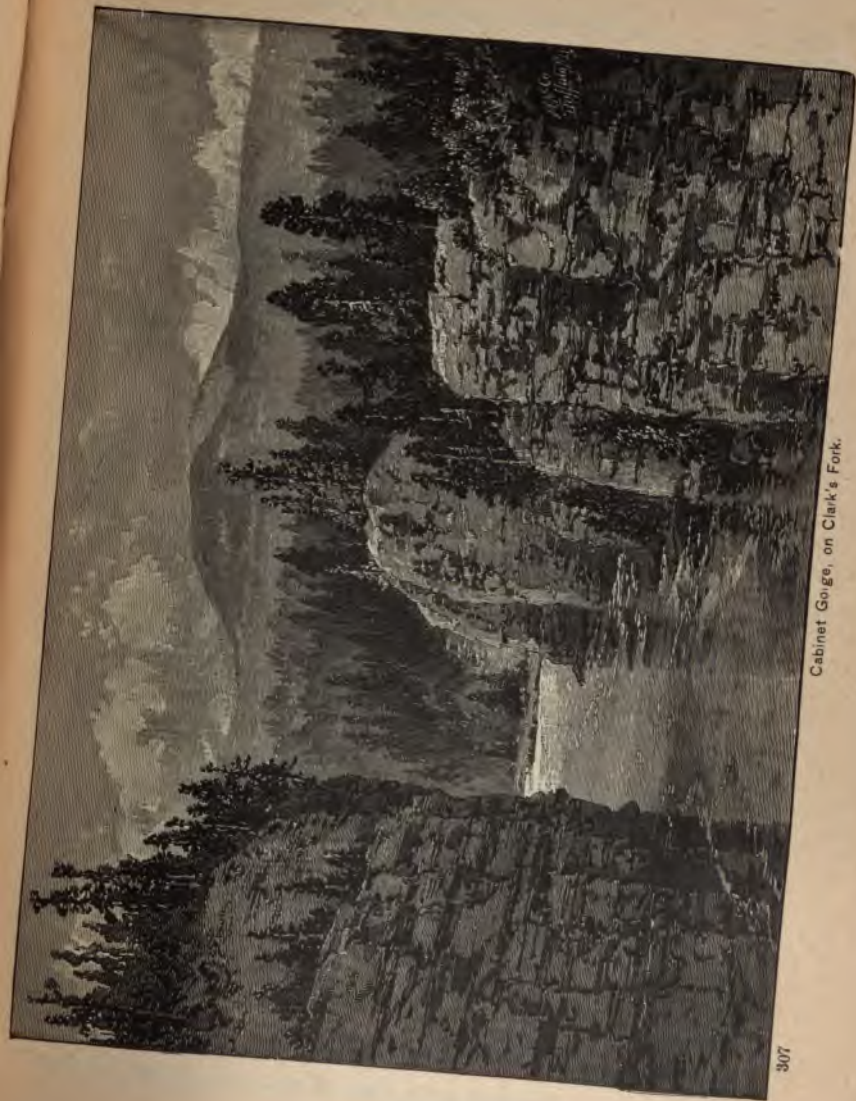
FROM HERON TO WALLULA.—DISTANCE, 270 MILES.

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**Heron** (1,429 miles from St. Paul; population, 300).—This is a new town built upon a plateau in the midst of a dense forest. It is wholly a creation of the railroad. Here the Rocky Mountain Division ends and the Pend d'Oreille Division begins. Heron has a round-house and a repair shop, and its people are nearly all in the service of the road. The Pacific coast time begins at Heron, and watches should here be turned back one hour in order to get the standard time between this point and the coast.

**Cabinet Landing.**—At this point, six miles west of Heron, the river is confined in a rocky gorge, through which it dashes at tremendous speed. The columnar rocks that hem in the torrent are from 100 to 150 feet in height, their brows crowned with pines, and the romantic wildness of the gorge is of surpassing beauty. The bold, fluted pillars of rock are not unlike those of the "Giant's Causeway" in Ireland. Cabinet Landing derives its name, in part at least, from the fact that here the Hudson's Bay Company, in carrying up goods by boat from the foot of Lake Pend d'Oreille to Horse Plains, was compelled to make a portage. From Cabinet Landing the train runs through solid rock cuttings, the walls of which tower far above the rushing, tumbling stream below. *Clark's*





Cabinet Gorge, on Clark's Fork.



*Fork*, a station on the confines of Idaho, eight miles from Cabinèt, is next passed; and ten miles further the pleasant town of *Hope*, on the strand of Lake Pend d'Oreille, is reached.

**Lake Pend d'Oreille.**—This beautiful lake may be likened to a broad and winding valley among the mountains, filled to the brim with gathered waters. Reaching the lake, the railroad crosses the mouth of Pack river on a trestle one mile and a half in length, and skirts the northern shore for upward of twenty miles. The shores are mountains; but, wherever there is a bit of beach, it is covered with dense forest. The view of the lake from the car windows, with its beautiful islands and its arms reaching into the surrounding ranges, is superb. The waters stretch out south, and fill a mountain cove to the southwest before those of the Clark's Fork meet them. From this point the river makes the lake its channel, and passes out at the western end on its flow northward to meet the Columbia, just over the boundary line in British Columbia. The whole length of the lake, following its curves and windings, must be nearly sixty miles. In places it is fifteen miles wide, and in others narrows to three miles. It is probable that the steamer now on the lake will ply for the pleasure and relief of travelers. The railroad goes north of the lake, by a circuitous route. It is possible to put on stages to connect from the southwest at some point above Rathdrum, a town on the line of the road distant only six miles from the west shore. Here the steamer could take passengers across the lake, and for some distance up Clark's Fork, making a saving of twenty-five miles before again connecting with the train, thus affording a relief from the monotony of railroad travel, and at the same time a fine opportunity to view the scenery of the lake.

The circuit of the lake shore is full of surprises. The mountains are grouped with fine effect, and never become

monotonous. Along the lake the most permanent features of civilization are the saw mills, which supplied material for railroad construction, and are now employed manufacturing lumber for shipment. The forest is interminable; but, where the



Skirting the Clark's Fork.

mountains are abrupt, the trees do not grow large enough and clear enough to make good lumber. The benches and levels along the streams are generally thickly studded with giant pines or firs, and these trees also tower in the ravines. These

spots of good timber are selected as sites for saw mills, and the carrying of lumber will be an important branch of traffic. The Northern Pacific Road reaches its farthest northern limit at Pend d'Oreille, and thence turns south and west.

**Kootenai** (1,464 miles from St. Paul).—At this station the Pack river enters Lake Pend d'Oreille, and from here an old fur-trading and mining trail leads to the Kootenai river, a distance of about thirty miles. The Kootenai is an eccentric stream, running first south, and making a long bend, and afterward flowing due north far into British territory. The Kootenai is navigable for 150 miles, for 100 miles of which it expands into a deep, narrow lake. A company of Portland business men has recently placed a small steamer upon this river, and design to open a regular route of travel from the Northern Pacific Railroad northward, by way of the Kootenai, to the Canadian Pacific Railway, the purpose being chiefly to develop the mining and agricultural resources in the valley of the Kootenai.

**Sand Point** (1,468 miles from St. Paul), on the shore of Lake Pend d'Oreille, was a place of importance during the time of railroad construction. It is also a good point to lie over for a day's hunting, or for catching some of the trout with which the lake abounds. A wagon road has been made from Sand Point to the Kootenai river, a distance of about forty miles. *Algoma* station is six miles beyond.

**Cocolala** (1,481 miles from St. Paul).—This station derives its euphonious Indian name from the bright sheet of water which lies near the track. The lake is several miles long, but not wide. On approaching it, a charming view of wave, wood and mountain will be caught. But we are passing out of Wonderland. Mountains no longer seem to overtop us. The train sweeps on toward the southwest, following a natural pass between the ranges, presently entering a valley a few miles wide. *There is no settlement along the road, and no cultivation.*





Lake Pend d'Oreille, Idaho.



The forests sometimes break away and give space for open country; but there is little except continuous woods. The only improvements we see are the railroad stations every few miles, and occasionally a saw mill. These are the pioneers of civilization in the Northwest. The stations have musical Indian names, such as *Chilco* and *Calispel*, and little else. Continuing southwestwardly, the road clings to a mountain side. *Loana* is passed, and, seven miles beyond, the Spokane valley is entered, near

**Rathdrum** (1,510 miles from St. Paul).—This is the first place of importance reached after leaving Lake Pend d'Oreille. It lies at the northern edge of the Spokane plain, the richest lands of which are near the town. It is the nearest point on the railroad to the town and military post of Fort Cœur d'Alène, ten miles distant, on the shores of the lake of the same name. Two hotels for tourists and summer residents have been erected at Cœur d'Alène City, immediately adjoining the beautiful, park-like ground of the military post. The town has 300 inhabitants. The lake affords excellent opportunities for fishing and boating, and the climate is peculiarly clear and healthful in the summer months.

During the season of navigation a steamboat runs from Cœur d'Alène City to Kingston and the old Cœur d'Alène mission, on the river of the same name, affording a route from the west to the Cœur d'Alène mines.

Nine miles beyond Rathdrum the Idaho line is crossed, and we are in Washington Territory.

## WASHINGTON AND OREGON.

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The prominent features of Washington Territory and of Oregon are so much alike that a descriptive outline of the topography, soil, climate and resources of the entire region, may well be grouped under one heading.

Washington Territory lies between the parallels of  $45^{\circ} 32'$  and  $49^{\circ}$  N., and the meridians of  $117^{\circ}$  and  $124^{\circ} 8'$  W. Its boundaries are: north by British Columbia, east by Idaho, south by Oregon, and west by the Pacific Ocean. The Territory ranges from 200 to 250 miles in length, and its greatest breadth from east to west is about 360 miles. Its area is 69,994 square miles, or 44,796,160 acres. Washington Territory was organized in 1853, and at that time included much of what is now Idaho. The population is estimated at 110,000.

Oregon lies between the parallels of  $42^{\circ}$  and  $46^{\circ} 18'$  N., and between the meridians of  $116^{\circ} 33'$  and  $124^{\circ} 25'$  W. On the north it is bounded by Washington Territory, on the east by Idaho Territory, on the south by Nevada and California, and on the west by the Pacific Ocean. The average width of Oregon, from east to west, is 350 miles, and from north to south, 275 miles. Its area is 95,274 square miles, or 60,977,360 acres. The population of the State is about 225,000.

The Cascade Mountains, a broad volcanic plateau, with many lofty, snow-clad peaks, rising high above the general level,

divide both Washington Territory and Oregon into two unequal parts, which differ widely in surface, climate and vegetation. Westward of this mountain chain, from forty to seventy miles, is still another and lower range, lying along the ocean shore, known as the Coast Mountains.

Between these two mountain ranges spreads out a great basin, about 400 miles in length, which is broken up into many well-watered valleys, all of which are fertile, and some of great size, the largest being the Willamette, Umpqua and Rogue river valleys, in Oregon, and the valuable timber area of Puget Sound in Washington Territory. The entire region west of the Cascade Mountains, including the slopes of these elevations, is covered with dense forests, mainly of coniferæ, which constitute a large source of wealth, especially in the Puget Sound district.

The climate of this section is mild and equable, with slight ranges of temperature, showing a mean deviation of only  $28^{\circ}$  during the year, the summer averaging  $70^{\circ}$ , and the winter  $38^{\circ}$ . There is an abundant rainfall, and the wet and dry seasons are well marked. The rains are more copious in December, January and March than at any other time. But the rain falls in showers rather than continuously, with many intervals of bright, agreeable weather, which often last for days together. Snow rarely falls in great quantities, and it soon disappears under the influence of the humid atmosphere. During the dry season the weather is delightful. There are showers from time to time; but the face of the country is kept fresh and verdant by the dews at night, and occasional fogs in the morning. The soil of the valleys of western Washington and Oregon is generally a dark loam, with clay subsoil, and in the bottom lands near the water-courses are rich deposits of alluvium. These soils are of wonderful productive capacity, yielding large crops of hay, hops, grain, *fruits and vegetables*.



The area east of the Cascade Mountains, by far the larger portion of Washington and Oregon, presents features in marked contrast to those which have been already outlined. This is not only true of climate, but also of soil and topography, fully warranting the popular division of the country into two sections, known as the coast region and the inland region, which are essentially dissimilar in aspect.

The area east of the Cascade Mountains extends to the bases of the Blue and Bitter Root ranges. A broad strip on the north is mountainous and covered with forest; but the greater portion embraces the immense plains and undulating prairies, 250 miles wide and nearly 500 miles long, which constitute the great basin of the Columbia river. Within the limits of this basin are a score of valleys, many a one of which is larger than some European principalities, all of which are well watered, and clothed with nutritious grass.

In the eastern section the temperature is decidedly higher in summer and lower in winter than in the western section,—the average indicating respectively 85° and 30°. The rainfall is only half as heavy; but it has proved sufficient for cereal crops. From June to September there is no rain, the weather being perfect for harvesting. The heat is great, but not nearly so oppressive as a much lower grade would be in the Eastern States, and the nights are invariably cool. The winters are short, but occasionally severe. Snow seldom falls before Christmas, and sometimes lies from four to six weeks, but usually disappears in a few days. The so-called "Chinook," a warm wind which blows periodically through the mountain passes, is of great benefit to the country. It comes from the southwest across the great thermal stream known as the Japan Current, and the warm, moist atmosphere melts the deepest snow in the course of a few hours.

The soil is a dark loam, of great depth, composed of alluvial deposits and decomposed lava overlying a clay subsoil. The



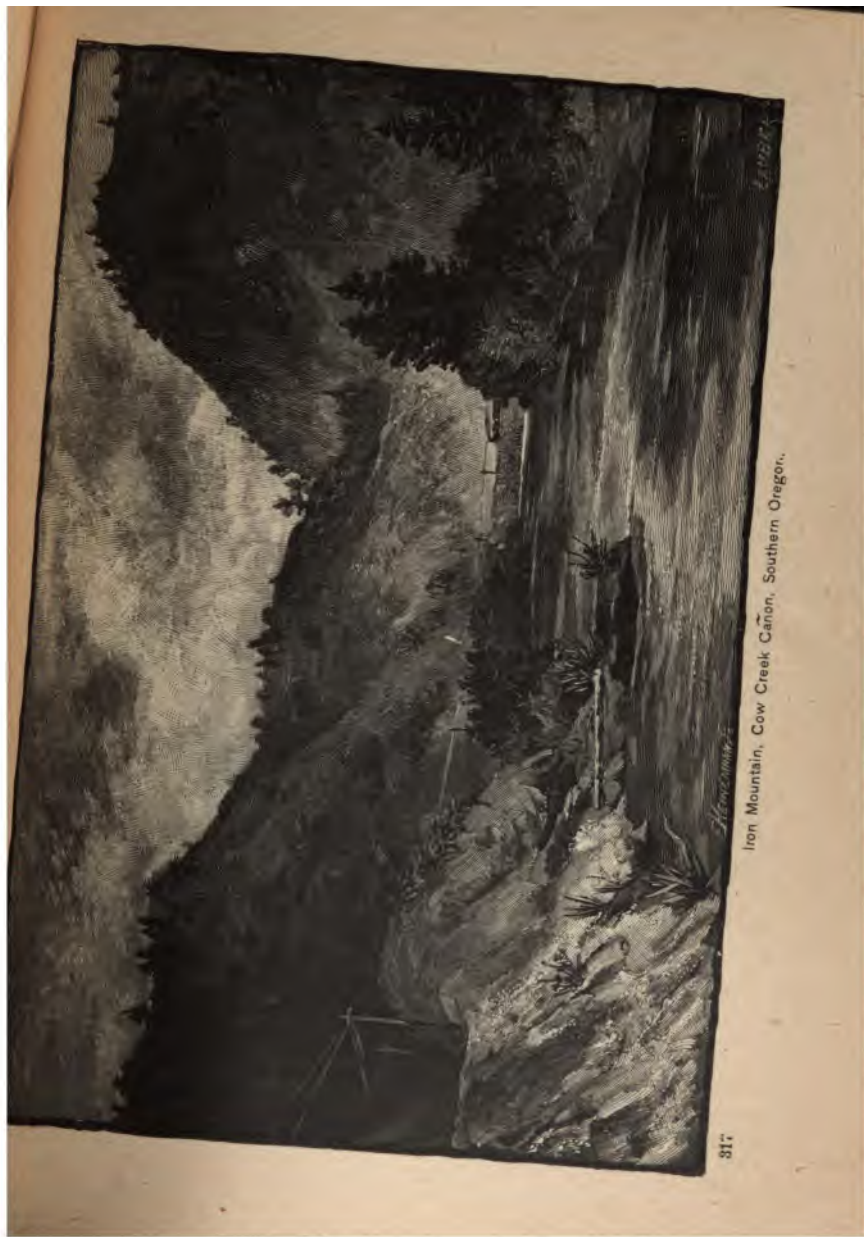
constituents of this soil adapt the land peculiarly to the production of wheat.

Agriculture is the leading industry at present, and wheat is the principal product of the entire country. Its superior quality and great weight have made it famous in the grain markets of the world, and insures for it the highest price, the quantity exported in 1885 being about 15,000,000 bushels. Oats and barley also yield heavily. Hops are a very important product, and widely cultivated in the Willamette valley, Oregon; and in the Puyallup and White River valleys, on Puget Sound; and in Yakima county, east of the Cascade Mountains, W. T. Vegetables of every variety, and of the finest quality, are produced. Fruits of many descriptions, all of delicious aroma and flavor, grow to a remarkable size. Among them are apples, pears, apricots, quinces, plums, prunes, peaches, cherries and grapes. Strawberries, raspberries, blackberries, gooseberries and currants are also abundant.

An important industry is the raising of cattle, sheep and horses. This is only second to agriculture, and is pursued in all parts of the Pacific Northwest. The horses are of excellent race, and excel in speed. Sheep husbandry has proved very profitable, especially among the Blue Mountain ranges.

It would scarcely be possible to exaggerate the extent and value of the forests. East and west of the Cascade Mountains there are large tracts of timber lands. The Blue Mountains and eastern slopes of the Cascades are thickly clothed with pine timber, and west of the Cascade Mountains there is an inexhaustible supply. Perhaps the finest body of timber in the world is embraced in the Puget Sound district. The principal growths are fir, pine, spruce, cedar, larch and hemlock, although white oak, maple, cottonwood, ash, alder and other varieties are found in considerable quantities.

The mineral wealth of Oregon and Washington Territory is *large and diversified*; but the mining industry has not yet been



Iron Mountain, Cow Creek Canon, Southern Oregon.

fully developed. Gold was discovered as early as 1851 in southern Oregon. Some time afterward auriferous gravel was found in large quantities in eastern Oregon, and at various times placer and quartz mining has been carried on in the extreme southern part of the Cascade Mountains in Oregon. Washington Territory likewise has yielded more or less of the precious metal. Coal takes a foremost rank among the mineral resources of the country. Immense beds of semi-bituminous and lignite coal are found west of the Cascade Mountains, and also east of those mountains, in the Upper Yakima valley. This mineral exists in Oregon in different localities; but the coal fields of Washington Territory are far more extensive. The principal mines are at Seattle, near Ellensburg, and also on the Puyallup and Carbon rivers. Iron ores—bog, hematite and magnetic—exist in great masses, and are found in both Oregon and Washington Territory.

The waters of all the rivers of Oregon and Washington flow into the Pacific Ocean, the largest of which, the Columbia, is navigable for a distance of 725 miles. The Willamette river is next in size, and may be navigated by the largest ocean steamships and sailing vessels as far as Portland, 112 miles from the mouth of the Columbia river, and by steamers a distance of 138 miles beyond. The Snake river comes next in importance, and there are many other streams navigable for short distances.

Puget Sound is a beautiful archipelago, covering an area of over 2,000 square miles. Its waters are everywhere deep and free from shoals, its anchorage secure, and it offers every facility that a great commerce will demand.

There are several commodious harbors for vessels of light draft on the coast line, exclusive of those found at the mouths of the several rivers. At these places a thriving trade is carried on in lumbering, coal mining, fishing, oystering, dairying and agricultural products.

*These waters abound in fish, of which many varieties are of*

great commercial value. Particularly is this the fact with regard to salmon. Extensive establishments for canning are carried on at several places. Especially is this the case on the Columbia river, where the business of salmon packing is one of the principal industries. The far-famed reputation which the Columbia river fish has acquired secures it a large market in the Eastern States, and it is sold extensively in Australia, England, and other European countries.





## SPOKANE FALLS & IDAHO RAILROAD.

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FROM HAUSER JUNCTION TO CŒUR D'ALÈNE CITY.—

DISTANCE, 13.3 MILES.

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At Hauser Junction, 19 miles east of Spokane Falls, a branch road diverges and runs south to the foot of Lake Cœur d'Alène. Trains on this branch are made up at Spokane Falls, which is the terminus for operating purposes.

**Cœur d'Alene City** (32 miles from Spokane Falls; population, 300) is beautifully located in the pine forests at the foot of the lake of the same name, and in the immediate vicinity of Fort Sherman, one of the most attractive military posts in the United States. Lake Cœur d'Alène is one of the most beautiful mountain lakes to be found anywhere in the world. It is surrounded by the spurs and foot-hills of the Bitter Root and Cœur d'Alène Mountains, and its shores are covered with open and park-like forests. Its length is about thirty miles, and it receives two navigable streams, the St. Joseph river and the Cœur d'Alène river. The latter, in connection with the lake, furnishes the water highway to the rich and prosperous mining region. Steamboats leaving Cœur d'Alène City, run up the lake and the Cœur d'Alène river to the Mission, a distance of sixty miles, where they connect with the trains of the Cœur d'Alène Railway & Navigation Company. This Company owns a narrow-gauge railroad, which runs to the towns of Wardner, Wallace and Burke, in the South Fork mining district,

thirty-four miles long, and is to be extended to Mullen. At all these towns there are important silver mines, the ore from which is concentrated and shipped to the reduction works at Wickes and Toston, M. T.

**Wardner** is a town of 1,500 inhabitants; *Wallace* has 500 inhabitants; *Burke*, 300, and *Mullen*, 300. Separated by two ranges of mountains from South Fork valley, is the Cœur d'Alène district, of which *Murray*, population 1,000, is the principal town. The towns and camps in this district are connected with the railroad line by stage service.

A trip to the Cœur d'Alène mining region can be strongly commended to the tourist, who admires picturesque lake, river, and mountain scenery, and to the business man, who is interested in the developments of the new and important mining region. The trip by steamer on Lake Cœur d'Alène and the river, is hardly equaled for beauty of natural scenery by any water journey of equal length in the United States, unless it be on the Hudson river. The old Jesuit church at the Mission, built in 1847, is an interesting building to visit.



## IDAHO DIVISION.

[Continued from page 312.]

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**The Spokane Valley and Lake Cœur d'Alène.**—One of the most singular districts of this country is the Spokane valley. It is thirty miles long, and three to six miles in width, surrounded by the western ranges of the lower Cœur d'Alène or Bitter Root Mountains. The Spokane river rises in Cœur d'Alène Lake, close under the timbered mountains, in Idaho, about ten miles south of the railroad. The lake extends south at least forty miles, and has long arms reaching in among the mountains. A rich agricultural region lies close to it on the west, in great part contained in the Cœur d'Alène Indian reservation. The Indians have always been at peace. Under the religious control of the Roman Catholic church, they have been well taught, and have become civilized, so that they are self-supporting. They market considerable wheat, and have extensive timothy meadows on the bottoms of the St. Joseph and Cœur d'Alène rivers, which drain the mountains for 100 miles into Cœur d'Alène Lake.

The rivers that drain the western water-shed of the Cœur d'Alène Mountains pour immense volumes into the lake; but the Spokane river, the lake's only outlet, is comparatively small in size, with no tributaries of importance. Still, thirty miles below the lake, this stream becomes a roaring cataract at the



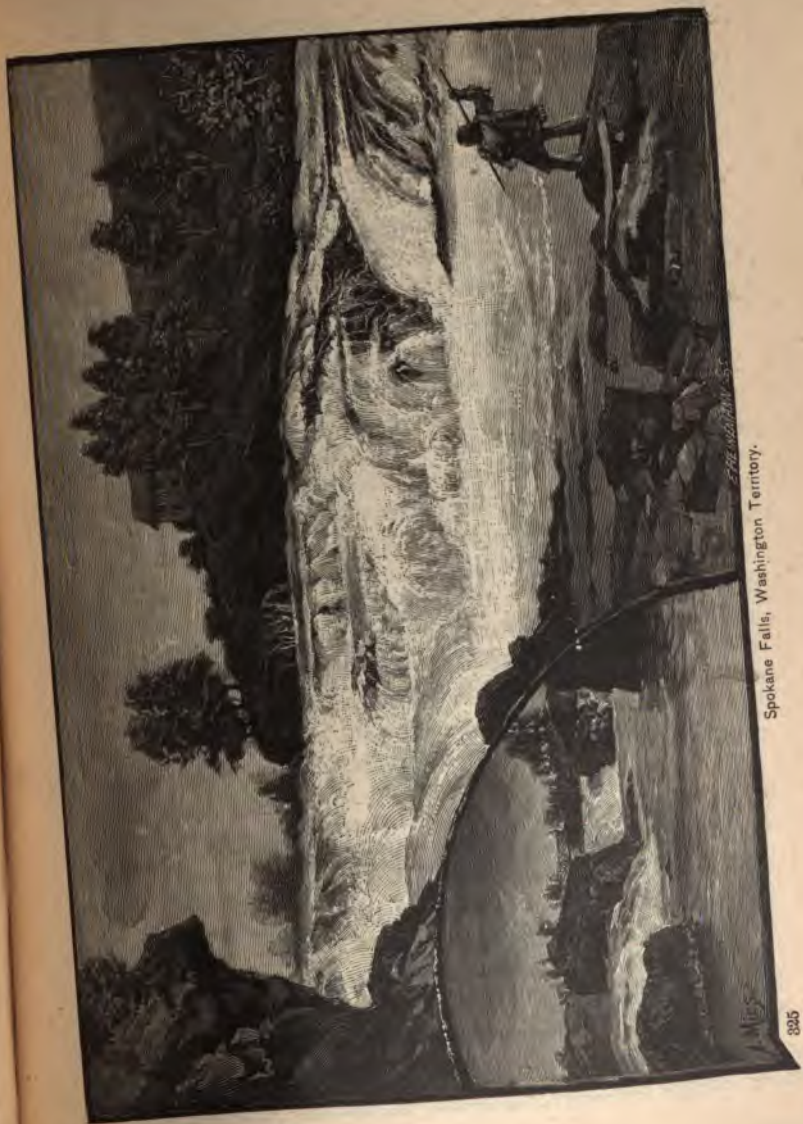
Lake Coeur d'Alene, Idaho.



town of Spokane Falls. The theory is advanced that the region around the lake and all the upper Spokane valley consists of a deep gravel deposit. Time has made for the lake a water-tight bottom, and a well, dug within a rod of its shores, will not furnish water, and no well can be dug in all the Spokane valley. The water furnished by the mountains soaks through this immense bed of gravel, making Spokane river, in its upper reaches, so puny a stream. Eight miles below the lake, there are the Little Falls, where the river flows between rocks very close together. Thirty miles below the gravel deposit ends, and basaltic shores close in upon the stream. Gradually, as the lower valley is reached, the river is increased in volume as the flow is forced to the surface, and, at the falls, it is all gathered well in hand, and makes a tremendous leap, with a force far greater than would be believed after seeing the Little Falls.

In spite of the gravelly character of the entire plain, there are many large patches and strips where a rich soil has been deposited. This is especially true of the upper end of the valley, and the people near Rathdrum are raising good vegetables and other crops. The railroad runs diagonally through this strange section, and soon reaches the fertile, well-wooded and well-watered regions of the Palouse and upper Columbia, into which there has been a heavy immigration for the past two years.

**Spokane Falls** (1,537 miles from St. Paul; population, 4,000).—This is the first point of importance reached in Washington Territory. It has, in some remarkable respects, more claims to consideration than any other place east of the Cascades. Its situation—upon the gravelly plains just above where Hangman's creek joins the Spokane river—is very beautiful, looking out upon the hills, with the grand, roaring water-fall in its midst. Spokane Falls is the oldest town in the northeast of Washington Territory, the only one that



Spokane Falls, Washington Territory.

preceded the railroad. Enterprising men were early attracted to the place, not alone by its natural beauty, but also by the wonderful water-power, so easy of control, and so abundant in a country that has very few water privileges. It will never be necessary to pave the streets of this city, nor will its people be troubled with mud. Its thoroughfares are macadamized sufficiently by Nature.

The educational facilities of the town are remarkably good. It has a large public school building; the Spokane Methodist Episcopal College, which occupies a handsome building on the north bank of the river; a Roman Catholic College, having a large new brick building, and being for the north Pacific coast what the Santa Clara College is for California; and also a number of private schools. There are six churches, Episcopal, Congregational, Methodist, Baptist, Presbyterian and Catholic. The milling and manufacturing establishments include three flouring mills, the largest of which has a building six stories high, with a capacity of 800 bushels per day; a saw mill, a sash, door and blind works, a planing mill, fence works, carriage works, and a bottling establishment. There are thirteen brick blocks in the town for stores and offices. The press is represented by one daily and two weekly newspapers. The river is crossed by three bridges. There are water-works, with the Holly system of supply from the Spokane river. Stages leave Spokane Falls for Fort Cœur d'Alène and the mines, for the Colville valley and mines, for the Little Dalles of the Columbia, whence a steamboat runs to the crossing of the Canadian Pacific Railway for Spangle, Blue Mountain, Lewiston, and for Medical Lake.

The falls, seen when melting snows swell the flow and the banks are brimming with the hurrying flood, are a sight never to be forgotten. Basaltic islands divide the broad river, and the waters rush in swift rapids to meet these obstructions. A public bridge crosses from island to island. The width of the



river is nearly half a mile. There are three great streams curving toward each other, and pouring their floods into a common basin. Reunited, the waters foam and toss for a few hundred yards in whirling rapids, and then make another plunge into the cañon beyond. Standing on the rocky ledge below the second water-fall, and looking up the stream, a fine view is obtained of the wonderful display of force. All things are weak and trivial compared with the tremendous torrent that heaves and plunges below, and the grand cascades that foam and toss above. Eternal mist rises from the boiling abyss, and sunshine reveals a bow of promise spanning the chasm.

**The Colville Valley.**—This is a rich silver and gold mining district lying north of Spokane Falls. The mountains on both sides of the Colville river, and also on the Columbia above and below the mouth of the Colville, contain valuable veins of galena and chloride ores of silver and of gold quartz. Development first began in 1884. So rich are some of the silver ores that they are hauled nearly 100 miles to the railroad, and then shipped to Omaha for smelting, a distance of over 1,500 miles. The most productive mine is the "Old Dominion," 10 miles from the town of Colville, and about 75 from Spokane Falls. At Gold Hill, near the mouth of the Colville, a stamp mill for working quartz is in operation.

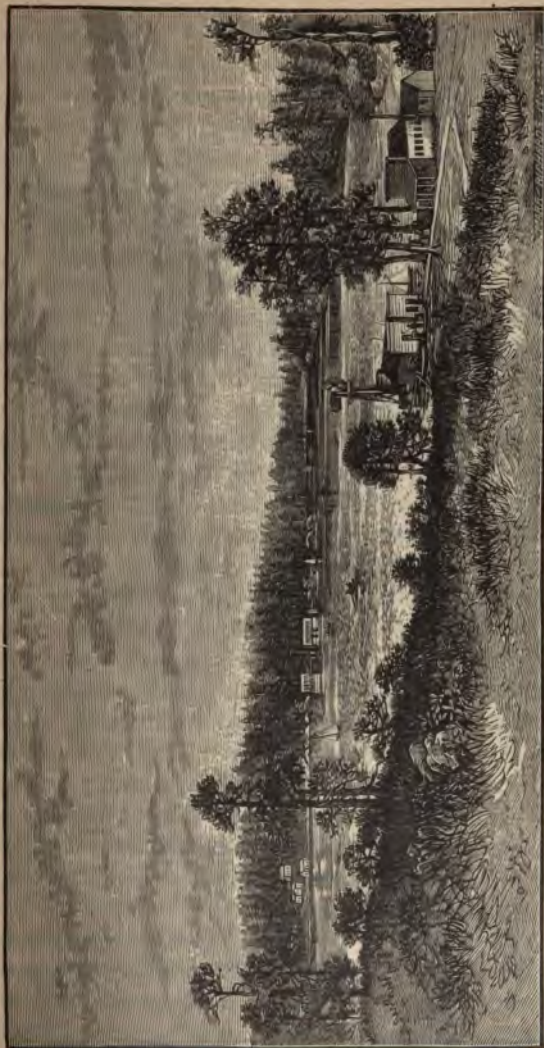
The chief town of the valley is Colville (population, 500), the county seat of Stevens county, the largest political division of Washington Territory. Other towns are Chewelah, at the head of the valley, and Marcus, on the Columbia, above Kettle Falls. The falls of the Colville furnish a magnificent water-power, now utilized by a small flouring mill. At Kettle Falls the Columbia makes a leap of 12 feet, and rushes through gorges in enormous rocks. Old Fort Colville, three miles from Colville, is an abandoned military post. At Little Dalles, 30 miles north of Colville, a stretch of open navigation on the



Columbia begins, which extends northward through the two Arrow Lakes to Farwell, the town at the crossing of the Canadian Pacific Railroad, about 225 miles. A small steamboat runs during the summer season. The Colville valley proper is a narrow strip of rich farming and meadow land, first settled nearly forty years ago by Hudson Bay Company employes and half-breeds. The Hudson Bay Company maintained a trading post at Kettle Falls until compelled to abandon American soil by the action of Congress. A Jesuit mission for educating Indian boys and girls was established in 1847, and is still kept up. A company has been chartered (1886) to build a railroad from Spokane Falls through the Colville Valley to Kettle Falls and Little Dalles, and its construction will soon be demanded by the development of the mines.

**Marshall** (1,546 miles from St. Paul; population 250) is the station where diverges the Spokane Falls & Palouse Railroad, now under construction (1886), which runs in a southerly direction through a rich farming and grazing district to the "Palouse country" and the Snake river.

**Cheney** (1,553 miles from St. Paul; population, 1,200).—This is an important and wheat-shipping point, in the midst of a rich farming country. Very little of this farming country is seen from the car windows, the railroad running through a belt of timber land. Cheney has two hotels; a steam flour mill; numerous stores, representing all branches of trade; two newspapers, four churches, a grain elevator, and a handsome Academy, erected by the beneficence of Benjamin P. Cheney, of Boston, one of the Directors of the Northern Pacific Railroad, and after whom the town is named. The wheat shipments amount to about one hundred thousand bushels a year. The grain goes East to Duluth, and thence to Eastern markets by water transportation. The agricultural country tributary to Cheney consists of rolling and hilly *plains*, with a rich soil, highly productive of wheat, oats,



barley, rye and potatoes. In its natural condition the surface of this region is covered with a flourishing growth of bunch grass, which affords excellent pasturage for stock. Stages leave Cheney for Fairweather, Cottonwood, Medical Lake, and the towns in the Big Bend country, and for Colfax, and other towns in the Palouse country south of the railroad.

**Medical Lakes.**—A few miles to the north of the road, there is a group of small lakes, three of which, having great depth, are very strongly impregnated with alkaline salts, and their water has remarkable curative properties. One in particular attracts hundreds of invalids, especially persons affected by rheumatism, skin diseases and nervous complaints. Many undoubted cures of a remarkable nature are recorded. This medical lake, *par excellence*, has a medium strength of salts, while another has a very strong impregnation, and the third is very weak. The region is delightful, and can be made a very pleasant resort. The country people come and pitch their tents and take their baths as they choose.

The early history of this lake is this: A Frenchman, named Lefevre, who was sorely afflicted with rheumatism, was tending sheep around the shores of the lake. He found, that, after washing the sheep in the lake water, his rheumatism was less painful; so he began to bathe his shrunken limbs, for one arm was wasted away and was carried in a sling. The result was a perfect cure of the rheumatism, and restoration of the wasted arm to its natural size. Lefevre still lives at Medical Lake in perfect health, no longer a poor shepherd, for the increase in value of lands from the discovery of the medical properties of the water has made him independent.

The town of Medical Lake is situated on the eastern shore of this lake; it has three hotels, a newspaper, a soap-making establishment, which uses the waters of the lake, and an establishment for evaporating the waters and producing a salt which *is sold for medicinal purposes*. Medical Lake is much resorted



to by invalids, and is a favorite camping ground and excursion place for the country people in the vicinity.

The next station is *Stevens*, 1,564 miles from St. Paul.

**Sprague** (1,578 miles from St. Paul ; population, 1,500) is the county seat of Lincoln county, and headquarters for the Idaho Division of the Northern Pacific Railroad, and the location of the Division shops. The shops include a car shop, a machine shop and a round-house, and employ a large number of workmen in car building, repairing locomotives, etc. Sprague has two hotels, seven general merchandise stores, two hardware stores, three agricultural implement stores, two drug stores, a brewery, a newspaper and a bank, three churches, and a large public school building. Tri-weekly stages run to Colfax, in the Palouse country, and to Harrington, Davenport, Brents, and other towns in the Big Bend country.

A singular fact in relation to all this upper country is, that the railroad for hundreds of miles either way follows the banks of rivers or the dry beds of old water-courses. The traveler does not see any good arable land as he journeys through it. At Sprague, looking eastward, there is a range of purple hills a few miles distant that are the western boundary of the fertile Palouse country. The level land between these heights and the railroad is rocky, with frequent ponds, and *Lake Colville*, two miles west of Sprague, lies along the road for eight miles.

The old water-courses are called coulées. The road follows them, from the time it leaves Spokane Falls until it reaches the Columbia river at Ainsworth, for 150 miles. Timber is abundant east of Sprague; but not a tree is afterward seen before the Columbia river is sighted, over 100 miles beyond. The coulées are rocky and desolate. There are stations all along, every few miles, and the company has planted shade trees at each of them, to show that, desert as this region appears, it only needs water and care to make the land productive.



Ten miles from Sprague the station *Harriston* is passed, and fourteen miles beyond *Harriston* the train reaches

**Ritzville** (1,602 miles from St. Paul; population, 300), the county seat of Adams county, and a point of departure for the agricultural and stock-raising country of Crab creek, north of the railroad, and in the Big Bend of the Columbia. It has a newspaper, an hotel, and a number of stores. Beyond Ritzville the country traversed by the railroad is mainly too dry for agriculture, but is covered with bunch grass, and is valuable for stock-raising.

The next stations are *Lind* and *Twin Wells* (distant 1,619 and 1,638 miles respectively from St. Paul).

**Palouse Junction** (1,647 miles from St. Paul) is in the midst of a dry, unsettled country, and is important only as the junction of the branch railroad running eastward, eighty miles, to Colfax, the county seat of Whitman county, and to Moscow, Idaho, twenty-four miles farther. The Palouse country, drained by the Palouse river, is reached by this road, and has a remarkably fertile region, extending from the base of the Cœur d'Alène Mountains westward sixty miles, and lying partly in Idaho and partly in Washington. The principal town on the Palouse branch is Colfax, a place of about 1,000 inhabitants, having flour and saw mills, and carrying on an extensive trade in the neighboring farming country. Other towns in the Palouse region are *Endicott*, *Palouse City*, *Pullman*, *Moscow* and *Farmington*. *Moscow* is a town of about 600 inhabitants, situated about ten miles from the foot of the mountains. *Lewiston*, the junction of the Snake and Clearwater rivers, is reached by stage from Colfax.

*Lake*, *Eltopia* and *Glade* (1,656, 1,665 and 1,675 miles respectively from St. Paul) are unimportant stations.

**Pasco** (1,682 miles from St. Paul; population, 100) is the point of divergence for the Cascade Branch of the Northern

Pacific Railroad. Wheat, corn and oats are successfully raised on the sage brush land near Pasco.

**Ainsworth** (1,685 miles from St. Paul) is at the confluence of the Columbia and Snake rivers, and, at the time of the ferry transfer of trains across the Snake river, and during the construction of the great bridge, was a place of importance. It is now nearly deserted.

**The Snake River Bridge.**—Next to the great bridge across the Missouri river at Bismarck, this is the most important bridge structure on the Northern Pacific Railroad. It was completed in 1884. The superstructure is of iron, resting upon granite piers.

**Wallula Junction** (1,699 miles from St. Paul), fourteen miles below Ainsworth, and 214 miles from Portland, situated on the south bank of the Columbia, is the western terminus of the Idaho Division of the Northern Pacific Railroad, and also the point at which the Oregon Railway & Navigation Company's road branches to Walla Walla. It is only important as a junction of roads, and as an eating station. The Walla Walla river comes in close by, but leaves all its fertile lands behind.

At Wallula the journey to Portland, Oregon, proceeds over the line of the Oregon Railway & Navigation Company. This railroad connects Portland with the country south of Snake river, going eastward from Wallula to Walla Walla, and thence still further eastward to develop the country, touching Snake river at Riparia, where steamboat navigation is maintained with Lewiston, in Idaho, the year round.

## SPOKANE &amp; PALOUSE RAILROAD.

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FROM SPOKANE FALLS TO GENESEE.—DISTANCE, 112 MILES.

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The traveler who desires to form anything like an adequate conception of the agricultural wealth of Washington Territory, should not fail to leave the main line of the Northern Pacific at Spokane Falls and make a journey over this branch through the wonderfully fertile Palouse country, which stretches at the foot of the mountains, in a belt about fifty miles wide, as far south as the Snake river. From the deep cañon of the Snake, a region of like fertility and general characteristics, generally known as the Walla Walla country, extends over 100 miles further, following the trend of the Bitter Root and Blue Mountain ranges. The Palouse country is upheaved in gentle grassy hills with rounded tops, and every acre is highly fertile, the summits of the hills being fully as valuable for grain fields as the slopes in the valleys which lie between. Wheat yields from twenty-five to fifty bushels to the acre, and oats, barley and rye do proportionately well. The whole country in its natural state is covered with a luxuriant growth of bunch grass, on which cattle and horses pasture the year round. The winters are mild and the snowfall light. The Spokane Falls and Palouse branch diverges from the main line at Marshall Junction, a small town 8.7 miles from Spokane Falls.

**Spangle** (20 miles from Spokane Falls) is an active trading point with a population of about 500. It has a weekly paper, and a number of general merchandise stores and grain-buying houses.

**Oakesdale** (46 miles from Spokane Falls; population, 400) has sprung up since the railroad was built, and is already an important trading point. *Belmont* (51 miles from Spokane Falls) has a population of about 200. *Garfield* (58 miles from Spokane Falls; population, 500) has a weekly newspaper, and is the point where the Spokane and Palouse crosses the Farmington branch of the Columbia & Palouse Railroad.

**Palouse City** (68 miles from Spokane Falls) is the oldest town in the Palouse country, and has a population of 1,000, with two weekly newspapers, three saw mills, two hotels and a bank, and a number of mercantile and manufacturing establishments. Logs are floated down the Palouse river to this place from the slopes of the neighboring mountains. Considerable placer gold is mined on the waters of the Palouse. The country around Palouse City is exceedingly fertile and picturesque.

**Pullman** (84 miles from Spokane Falls; population, 400) is the point where the Spokane & Palouse road crosses the Moscow branch of the Columbia & Palouse Railroad, and is a growing trading town central to an extensive region of excellent farming country.

**Genesee** (112 miles from Spokane Falls), the present terminus of the Spokane Falls & Palouse road, has a population of about 300, and like all the other towns on this branch is supported by an excellent country for general farming and stock raising.

**Lewiston, Idaho** (about 15 miles from Genesee), is an old and prosperous town, situated at the junction of the Snake and Clearwater rivers. The Spokane & Palouse road will



eventually be extended to this place, and will also throw a branch eastward up the valley of the Clearwater. Lewiston has a population of 1,500, and has a large trade with the surrounding farming country and with the mining districts of Northern Idaho. Steamboats run up the Snake river and also at high water on the Clearwater river.



## OREGON RAILWAY & NAVIGATION COMPANY.

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WALLULA JUNCTION TO RIPARIA.—DISTANCE, 87 MILES.

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Leaving the river at Wallula, the main line of the Oregon Railway & Navigation Company's railroad follows up the valley of the Walla Walla river, thirty-one miles to Walla Walla. The aspect of the country improves gradually as the distance from the river increases, and before reaching Walla Walla the country has become very fertile. The river is a small stream that pours into the Columbia without much demonstration,—merely a channel cut through sand and sage brush, although further up there is an occasional fringe of willows. There is no appearance of even a village during this stretch of thirty miles, only side-track stations, a few miles apart, for the transaction of the railroad business.

**Whitman** (26 miles from Wallula, and 5 miles from Walla Walla) is merely a side track. It, however, marks the scene of a deplorable tragedy. In 1836 Dr. Marcus Whitman, a physician, who was also a clergyman, was sent out from the East as a missionary to the Cayuse and Umatilla Indians. Even at that early day Christian sympathy was drawn toward the aboriginal tribes of the upper Columbia, and to this

instrumentality the preservation of the Northern Pacific country to the United States is mainly due. Dr. Whitman established his mission at Wai-lat-pu, now Whitman's station, where he faithfully labored among the red men. In 1847 he was making a professional visit to the Hudson Bay post at Wallula, from which his station was twenty-five miles inland, on the Walla Walla river, combining, in accordance with his usual custom, the practice of medicine with the preaching of the gospel. When at Wallula, Whitman saw the arrival of a Roman Catholic priest and his party, and heard the boast made that Oregon was certain to belong to the British, as Gov. Simpson, of the Hudson's Bay Company, was in Washington, making negotiations to that end. This news weighed so heavily upon the missionary's mind, that, though late in the autumn, he prepared for and undertook a midwinter journey across the continent, made representations to the government as to the true value of the country, piloted the first wagon train through to the Columbia river the following spring, and so was greatly instrumental in preventing British ascendancy in the Pacific Northwest. The year after Dr. Whitman returned to his mission, he, his wife, and others, were massacred. It seems that the measles broke out among the Indians with great fatality. The medicine men of the tribes charged Whitman with causing the disease, and one night the cruel savages murdered their benefactor, with all his companions. The massacre occurred at the north end of the ridge, west of the railroad. There the victims were buried, and efforts are now making to raise a monument "to the memory of Dr. Marcus Whitman and his associate dead." This tragedy led to the Cayuse war of 1848.

**Walla Walla** (31 miles from Wallula) is beautifully situated upon an open plain that is watered by the divided flow of the Walla Walla river. Beyond it the Blue Mountains stand like a wall, and among the foot-hills is the richest agri-

cultural district known. The city has 6,000 inhabitants, and a handsome business street, with substantial blocks of stores,—some very fine ones. Though no forest trees are native to the plain, the streets are lined with shade trees, usually poplar, and the gardens are filled with orchards and vineyards. The private residences are often beautiful. Near town is the military station of Fort Walla Walla, and the presence of troops adds something to the business as well as to the attractions of the city.

Walla Walla has ten churches, a public library, a remarkably handsome court house, which is the finest public building in Washington Territory; two opera houses, and a city hall; St. Mary's Hospital, conducted by the Catholic order of the Sisters of Mercy; three public school buildings; a well-organized fire department, with two steam engines and a hook and ladder truck. One of the principal buildings is the Odd Fellows' Temple, occupied by both the Odd Fellows and Masons. Whitman College is an institution for the higher education of both sexes, having complete classical and scientific courses. St. Paul's school for girls is an institution for boarding and day scholars. The Catholics have two schools. St. Vincent's academy for girls occupies a large brick building in the midst of pleasant groves, and St. Patrick's school is a day school for boys. A branch of the Oregon Railway & Navigation Company's system runs from Walla Walla to Blue Mountain, nineteen miles. There is also railroad communication to the north, as far as Snake river, to Riparia, by the main line of the same company, with a branch from Bolles Junction to Dayton, making Walla Walla the railroad centre for the entire country between Snake river and the Blue Mountains. The Mill Creek Flume and Manufacturing Company have a narrow-gauge railroad from Walla Walla to Dudley, nine miles, connecting with a flume fifteen miles in extent, down which lumber and wheat are brought to the city from the Blue Mountains. A branch road



extends up Dry creek six miles; both the main line and branch carry grain from the wheat fields to the Oregon Railway & Navigation Company's line. The agricultural country tributary to Walla Walla along the slopes of the Blue Mountains and the adjacent plains, is of remarkable fertility, the soil being adapted in an especial degree to the production of wheat, and a yield of forty bushels to the acre is not at all unusual. This is also a fruit country, the apple, pear, plum and cherry, grapes and all the berries being raised in profusion and perfection. Fifteen miles beyond Walla Walla the railroad comes down from the hills into the valley of the Touchet river, and follows up that stream to Palouse Junction, whence the main line runs northward to Riparia, on the Snake river, and a branch continues up the Touchet, thirteen miles further, to Dayton. *Prescott* (51 miles from Wallula Junction, and 20 miles from Walla Walla) is a small town with a flouring mill. *Bolles' Junction* (56 miles from Wallula) is an unimportant station.

**Riparia** (87 miles from Wallula) is the terminus of the railroad on Snake river. The stations between the Junction and Riparia are *Menoken, Alto, Relief, Starbuck* and *Granger*, and are unimportant. The principal business of Riparia is the transshipment of wheat from steamboats which run on the Snake river.

**Waitsburg** (59 miles from Wallula Junction; population, 500).—This is the oldest town in the Touchet valley, and was settled in 1870. It is a place of considerable business importance, as a milling and wheat-shipping point, and a country trade centre. It has a newspaper, two hotels, three churches, a number of stores, and large flouring mills.

**Dayton** (69 miles from Wallula; population, 2,000) is, next to Walla Walla, the oldest town in Washington Territory south of Snake river. It stands at the junction of the Tou-

chet river and Petit creek, in the midst of a beautiful and exceedingly fertile and agricultural country. The Touchet furnishes good water-power, which is utilized for several saw mills, two flouring mills, a chair factory, and a sash and blind factory. Dayton has five churches, two newspapers, one of the largest public school buildings in Washington, two hotels, and about twenty stores. It is the county seat of Columbia county, and was named in honor of Jesse Day, the pioneer settler. The surrounding country is upheaved into high hills with rounded tops; the summits and slopes of these hills are as fertile as the bottom lands in the narrow valleys between them; in fact, the farmers prefer the hill tops for wheat fields. Stages run from Dayton to Pomeroy, Pataha and Lewiston. Pomeroy is the county seat of Garfield county, which lies immediately east of Columbia county. The town has a population of about 1,000.

**Snake River Navigation.**—At Riparia the railroad terminates for the present, and connection with the places on Snake river, as far as *Assotin*, which is near where the river emerges from the Blue Mountains, is made by means of the Oregon Railway & Navigation Company's steamboats. These touch at landings on either shore, and bring to market heavy freights of grain and wool, grown in the lower Palouse country, and between Snake river and the Blue Mountains. The chief points are *Penewawa*, *Almota*, *Warwarwai* and *Alpovai* Landings, where the business of the country is handled and its products shipped.

**Snake River** flows deep down in an immense cañon, whose cliffs are a thousand feet or more in height. Generally, the points are rock-ribbed; for the strata show on every bluff. To ascend these cliffs is impossible, except some ravine is followed to its source, or a roadway is graded, carefully winding up the face of the acclivities. The shipment of grain would be attended with difficulty if the farmer had to haul his load down

such tremendous hills, and spend hours returning to the plain above with his empty wagon. The evil is remedied by the construction of shutes leading for thousands of feet from the summit, down which the grain is poured to the warehouse on the river. There is communication between the various shipping points by means of a telephone, and the business is transacted with dispatch. The farmer simply delivers his wheat on the hill, and goes home rejoicing. The landing places named are merely warehouses, with perhaps a store, though goods are generally shipped and sent inland to Pomeroy, Pataha and a number of other towns situated in the farming region. The cañon of Snake river looks like an inferno; but the traveler who judges the country by this river scenery is entirely out of his reckoning. For example, to climb the grade opposite Lewiston is two hours' hard work, over two miles of distance; but, when foot is placed on the surface of the rim rock, a rolling prairie region of excellent farming land is spread out far as the eye can reach. This is the case generally on the Columbia and Snake rivers. The bars lying at the foot of the high bluffs along the river have proven to be especially favorable for fruit culture, and the yield is large.

**Lewiston** (78 miles by steamboat from Riparia; population, 1,000).—This town was early created by the needs of the mining regions of middle Idaho. Mining was conducted with fabulous success in 1862; but the placers were exhausted long since. Now Lewiston is permanently supported by the agricultural and pastoral resources of a wide region. It is built at the junction of the Clearwater and Snake rivers, under the bluffs, that are not high on the side of the river whereon it is situated. It has all the equipment for a thriving place. There are good hotels, two newspapers, a bank and heavy mercantile establishments, and its necessities will in time demand railroad facilities. The fertile coun-

try tributary to Lewiston extends for about fifty miles east from what is called the Potlatch region to the base of the Blue Mountains.





## ALONG THE COLUMBIA RIVER.

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WALLULA JUNCTION TO PORTLAND.—DISTANCE, 214 MILES.

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Returning to Wallula Junction, the journey westward is continued down the Columbia river upon the track of the Oregon Railway & Navigation Company. The immediate vicinity of the station is a wind-blown desert, with only a thread of green visible where the Walla Walla river struggles with the shifting sands to reach the Columbia. Northward rise the dark hills of Klickitat county, and just below the mouth of the Walla Walla the ridge that it follows ends in a rocky bluff. In cutting through this range of hills the Columbia has left two bold-faced and strata-marked headlands, facing each other, and affording the finest bit of landscape to be seen along the river for a hundred miles. Craggs stand like ruins, more grand in their bronzed and rugged decay than any crumbling relics man has left. On one of them there are two colossal pillars, twin monuments of basalt, that can be seen in glimpses as the train passes. The popular legend is that the line dividing Oregon and Washington runs between these pillars.

Passing these grand bluffs, the river courses through a region of low shores without a special object of interest for many miles. But, sterile and forbidding as this part of the route seems, still, not far from the road, on the Oregon shore,

begin the rich farming lands of Umatilla county. Indeed, beyond the bluffs, on either side of the river, there are arable lands within a few miles of the track. On the Washington side, a large fertile flat, containing thousands of acres, has been left vacant until quite recently; but a few settlers have now taken some of the land and made rude improvements. Irrigation is not very difficult where wind and water may be so easily utilized, and within a few years these wilderness shores of the upper Columbia in many places will be made productive. The distance by rail from Wallula Junction to the Dalles is 127 miles. All the northern shore is that of Klickitat county, W. T., a region larger than two of the original thirteen States; and behind the low bluffs that bound the river for a stretch of sixty miles there are fine arable lands, upon which immigrants, doubtless, will shortly establish their homes. Passing the stations of *Cold Spring* and *Juniper*, the next halting place is

**Umatilla Junction** (27 miles from Wallula), a place that has been of commercial importance for over twenty years. It possesses little attractiveness, because there is nothing to relieve the monotony of sage bush and sand. The discovery of gold in the Blue Mountains, in 1862, made Umatilla the point for reshipment of goods. Merchandise intended for eastern Oregon and southern Idaho all came this way. There was at that date no Central Pacific Railroad, and the water transportation reduced the haul by wagons to the famous diggings of the Boisé Basin and the Owyhee about 300 miles. Umatilla then rose—it did not bloom—to be a place of many rough buildings, and a fair share of rough trade. Long trains of patient pack mules or impatient cayuse ponies were going and coming, the picturesque array increased by the immense wagon caravans, often with eight mules or horses, or as many oxen, as propelling power. That was a day of dust and weariness; but Umatilla thrived upon it. Then came the decadence of the mines, the Central Pacific supplying what was left of

the great mining camps of southern Idaho. But the dawning of the farming era inland, near by, soon built up thriving towns like Weston and Pendleton, and left Umatilla deserted until the construction of the railroad again brought it into prominence as a point of junction.

**The Baker City Branch Line.**—The Oregon Railway & Navigation Company has built a system of railroads that is intended to develop all the agricultural areas tributary to the Columbia and lying south of Snake river. So far, this system embraces the continuation of the trunk line from Wallula to Walla Walla and beyond, and a branch railroad to Baker City, in eastern Oregon.

The Baker City Branch, known as the Mountain Division of the Oregon Railway & Navigation Company, diverges from the main line at Umatilla, 186 miles from Portland, and is operated to *Huntington*. The route from Pendleton lies over the Blue Mountains, crosses Snake river at the mouth of Burnt river, traverses the length of the beautiful Grande Ronde valley, in which are the thriving towns of *La Grande* and *Union*, and passes by an easy divide into the Powder river valley, where it connects with the Oregon Short Line of the Union Pacific Railway.

**Pendleton** (230 miles from Portland; population, 600) is in the midst of an extensive and fertile farming region. It has a flouring mill, a sash and door factory, and a planing mill, and two newspapers. It is the county seat of Umatilla county. The branch road to Centerville is to be completed from there to Blue Mountains, a distance of seven miles, to a connection with Walla Walla. *Centerville* has 500 people, and is an important wheat market town.

**LaGrande** (304 miles from Portland; population, 1,500) is the division headquarters for the Mountain Division of the Oregon Railway & Navigation Company, and has machine shops located here.

**Union** (317 miles from Portland; population, 1,500) is the county seat of Union county. The town lies two and a half miles from the station.

**Baker City** (356 miles from Portland; population, 2,000) is the county seat of Baker county. There is good stock-raising, with quartz and placer mining, in the Powder River Mountain and vicinity of Baker City.

**Weatherby** (392 miles from Portland, and about nine miles from Conner creek mine) is said to produce the richest gold quartz in the world. The annual yield for some years has been over a million of dollars.

**Huntington** (404 miles from Portland, and about two miles west of Snake river) is the junction with the Oregon Short Line of the Union Pacific Railway, connecting with the main line at Granger. It has a population of about 200.

The intermediate stations on this division are unimportant. In the Powder river and Burnt river region, the road crosses a second spur of the Powder River Mountains, at a grade of 116 feet on the eastern, and of 79 feet on the western, slope.

**The Main Line Again.**—After crossing the Umatilla river, here simply a sandy channel pouring a small stream into a large one, but tearing its way through the Blue Mountains, forty or fifty miles above, with the force of a powerful torrent, the stations *Stokes* and *Coyote* are passed,—the latter unsentimental name derived from the slinking wolf of the country. Nine miles beyond the latter station is *Castle Rock*, standing between the track and the river, appearing like a Druidical monument or colossal altar of basalt. This rock is forty feet high, although a casual look gives no such impression. It is only noticeable as the single interesting feature in a scene of desolation. Perhaps it is a relic of the oldest superstition of the farthest West, with a wonderful history, if only there were any left to tell the reason that it stands so solitary. *Willow creek*, nine miles further westward, is one of many benefi-



cent streams which leave the mountains, and fertilize and beautify the plains, and then lose themselves in the great Columbia. A bunch of green willows marks its exit, and keeps its memory verdant.

**Alkali** (73 miles from Wallula).—This is a trading point, with a suggestive name, where has spread over the sandy hillside a street of rough board houses, that keep merchandise of all kinds, from a fine cambric needle to a Buckeye mower. This town of Alkali has turned its neighboring desolation into life and animation. There is a good farming country connected with it, which, not afraid of the name, builds up the fortunes of the traders. Alkali is the station for Heppner, a flourishing town of about 500 inhabitants, in the centre of an extensive sheep-raising district.

**Blalock** (80 miles from Wallula).—Blalock was named for an enterprising physician of Walla Walla, who devotes the income from his profession to farming projects. Dr. Blalock's farms, near Walla Walla, being very productive, he made up his mind that the country along the Columbia was equally fruitful. Now, with others, he has some thousands of acres in wheat on the bluffs that rise above the station.

The region of low shores and level country has here been passed, and the Columbia flows through deep-cut banks that are hundreds of feet in height. Desolation has become picturesque. Many rocky strata crop out on the overhanging cliffs, and reveal the processes by which nature wore a channel for the great river. Down in the cañon, there is no pleasant shore, no fertile reach of valley land, no living green; no fringe of willows even waves along the bank. Instead, there are shifting sands that cover a great part of the land level with the river's flow. The town proprietors are trying to sow some suitable grass-seed on these sand reaches, in hope to rivet them by the aid of roots, and cure them of their restlessness. While great bluffs overhang the shores, on the south

a ravine winds through the heights on an easy grade, and climbs by three miles of good road to a rolling upland prairie, now partially under cultivation, and promising to become magnificent farming ground.

**The John Day River** (97 miles from Wallula).—This river enters the Columbia from the south, passing out through a walled cañon to reach the larger stream. A few miles distant its sunny shores are crowned with rich fruitage, for an enterprising farmer has thousands of bearing trees of various fruits. It is worthy of note, that, wherever the valley of any of these streams widens to admit of planting trees, and the land can be irrigated, the result is an excellent quality and prodigious yield. Down in these ravines the settler is sheltered from the vicissitudes of the seasons, and one wonders to see that the peach, apricot, almond, nectarine and finest varieties of the grape, including the raisin grape of California, all thrive, never knowing failure. The Snake and the Columbia rivers, and many of their tributaries, lying between the forty-second and forty-ninth degrees of latitude, usually flow through deep cañons, and in their narrow valleys can be grown the fruits of California, as well as those native to the far North. There is proof of this when passing down below the John Day. The town of Columbus is built on a level reach on the Washington side, and fairly blooms with verdure. It is surrounded by peach orchards and other trees, a very oasis that gems the shores with a flush of green to cheer as the train flies on.

At the mouth of the John Day river, the scenery along the Columbia improves in rugged grandeur, and the rapids in the river show tossing waters, the navigation of which requires a careful pilot. The railroad ignores the rapids, except when the unusual high water of exceptional years threatens the integrity of the track.

John Day was a pioneer of early times, who seems to have

had two streams named for him, the other John Day river entering Young's Bay, between Astoria and the ocean.

**Geological.**—It is noticeable that the rivers of western Washington and Oregon flow through natural valleys to reach the sea, while all the streams east of the Cascade Mountains have cut through deep cañons. The theory is, that many centuries ago these eastern valleys were buried thousands of feet deep. Then, as now, the winds swept off the ocean from northwest and southwest; and, when this region went through its different volcanic epochs, and fiery eruptions occurred, these winds swept the light ashes toward the east. Ashes and scoria and lava flow succeeded each other, covering deep down the lonely valleys, lakes and plains that existed when the mastodon roamed the earth. Prof. Condon, of the Oregon State University, learned years ago of the existence of fossil remains of the Pliocene period that had been found where the waters of John Day river, in cutting a channel, had exposed the bed of some old lake, now buried 1,500 feet. Other scientists, including Prof. Marsh, of Yale College, investigated in the same direction, and the treasures of scientific collections have been increased by remarkable specimens gathered in this John Day river region. Near the mouth of John Day river is a remarkable lava bed, over and through which the railroad passes. The space between the river and the bluffs is narrow, but is filled by black incrustations of lava, affording a glimpse of a region that, for a small extent, might be styled infernal. It is pleasant to know, that on the heights above us are waving fields of grain, and that a little way up the John Day river is a bearing orchard of thousands of trees. Only thirteen miles from the mouth of the John Day river, the Des Chutes is reached, another stream that heads far south. It collects the waters of the eastern shed of the Cascade Mountains for 200 miles, and sends a tributary to sweep up *the streams that descend far south from the Blue Mountains.*

These two rivers are alike swift and turbulent, and come through deep-worn cañons to join their floods with the Columbia. Crossing the Des Chutes, the road winds around its western bank to reach Celilo, on the Columbia, a wind-driven spot, which, for a score or more of years, has been the western terminus of upper Columbia navigation.

**Celilo** (114 miles from Wallula), translated from the aboriginal, means "The Place of the Winds." The hills on the Washington side rise bluff and frowning. On the Oregon shore the shifting sands are freely driven by the unceasing winds. Above, for hundreds of miles, it is possible to send steamboats up the Columbia and Snake rivers. But from Celilo to Dalles City, a distance of thirteen miles, navigation is forbidden by obstructions that are only overcome when it is necessary to take some steamer from the upper to the middle river. When the melting snows have swollen the Columbia to its fullest flow, and the waters boil so far above the rocks as to make the passage possible, then the coolest nerve is requisite, and the most consummate skill called for.

In early days the corporation that controlled the river cemented its chain of transportation by constructing a railroad, thirteen miles in length, from the Dalles to Celilo. It also had a shorter portage road around the Cascades, by which means the traffic of all the upper country for many a year was controlled. This portage has become a portion of the main trunk road up the Columbia river. Steamboats sometimes load at Celilo to accommodate trade along the river, or to take freight up the Columbia above Ainsworth; but the glory of the river trade has departed. The fine steamers that used to navigate these waters have made the perilous passage over the Little Dalles, the Great Dalles, and the Cascades, and are earning dividends on the lower Columbia or Willamette, or else on the broader waves of Puget Sound.

Soon after leaving Celilo, the scenic regions of the great



river are approached. If it is early summer the hills to the north have not entirely thrown off their tinge of silver gray, given by the waving bunch grass. Later, after the grass has matured, these great hills, as well as the plains, turn to tints of golden brown. A short distance below Celilo the track curves around a steep basaltic cliff that overlooks the river, and wears the name of Cape Horn. Early travelers were not apt at names, and too often attached commonplace appellations to grand objects that deserve respectful treatment. This Cape Horn has no distinctive name, because there is another and grander Cape Horn on the river below.

**The Little Dalles**—If it is early summer, and the Columbia is at flood, there will be seen below Celilo the Little Dalles of the river, a spot where the fall is enough to create foaming rapids for half a mile or more, as the pent-up water rushes between the lava walls. The Little Dalles, however fine in itself, is rendered almost insignificant by comparison with the Great Dalles, six or eight miles below.

**Indian Salmon Fishermen.**—Over on the Washington side some Indians have their picturesque village,—pole wigwams covered with mats or skins,—to which distance lends all the enchantment. Here they come in the fishing season to catch salmon, which is dried for winter food. Half a century ago they came by thousands, and the desolate shores were alive with them. Every rock had its claimant, and every tribe its prerogative of fishing ground. Then there were no scores of canneries and packing establishments to devastate the fish, and no cunningly devised and cruel salmon wheel at the Cascades to swoop them up as they passed in myriads to the spawning grounds. Now only a few score Indians come to remind the whites that a remnant of the race still lives. If in June or July, a glimpse may be caught of some Siwash swinging his spear or wielding a scoop net over fierce rapids, waiting and watching for fish to ascend. The whole village is

roused by the advent of the train, and, if at nightfall, the sons of the forest may be seen waving a greeting, their weird forms outlined against the sky. The family mansion, with its barking curs and its smoking fire, is under the rocky wall. The Indian comes to the river for his fish supply as regularly as the year rolls around, and his cayuses browse near by on scant herbage found among the sage brush.

**The Great Dalles of the Columbia.**—During the months when the river is at low stage the Great Dalles is not a noticeable spot. It, however, well repays a careful examination, and rewards an observant visitor. It is five miles from the Great Dalles to Dalles City itself. All the way the scenery is inhospitable but surprising. To the west lies Dalles City, with its background of near hills and distant mountains. Towering above all, with its crown of snows, is Mount Hood, 11,000 feet high. The *tout ensemble* is magnificent. Glimpses of the city and the mountains high above it are to be caught as the train moves on; but they are apt to be neglected in watching the wonders of the river. When the flood is low, the Great Dalles affords a view of a wide expanse of lava incrustations, with no river visible. You cross toward the north, climbing over the rough and rocky surface as you can, to find the river confined in a narrow cut close to the Washington shore. The flow is swift and dark. You pick up a stone,—standing at the very brink,—and easily throw it across from the Oregon to the Washington shore. And this is the mighty Columbia! You fling a second pebble so far that it surmounts the northern cliff, and might strike some animal grazing there. The truth is,—and it is a wonder as well as a truth,—at this place the tremendous volume of the greatest river on the west of North America is confined in a cut not much over sixty yards in width, but of fathomless depth. Fremont attempted, when he was earning his fame as an explorer, to measure the waters, but never could fathom them. The fact is undeniable



Mount Hood, from the Head of The Dalles, Columbia River, Oregon.

that the river is turned on edge. You have seen the Great Dalles when the flood was low ; but, if you see it when the river is full, you will find the wide expanse of rocks you clambered over to reach the chasm covered, many fathoms down, by a boiling flood that rushes furiously through every channel, and hurls itself wickedly against huge rocks that bar its passage. For two miles or more the broad river is a furious torrent that you can not weary of looking at. For that distance the surface foams and rushes in a thousand fantastic shapes, boiling where a hidden rock stands firm,—a tremendous whirlpool where there are room and depth for it. The foaming surges race and rush past one another, and sullenly disappear to give place to new shapes of frenzy. The stillest point is along the further shore, where the waters are deepest.

The United States Government caused a survey of the Dalles to be made in 1880, and the following description is taken from the notes of Mr. E. Hergesheimer, assistant in the United States Coast and Geodetic Survey, who performed the work :

“ At this reach the river has worn through and carried away the successive layers of basalt for a depth of about 1,000 feet below the present summits, and, as the crests of the escarpments are still visible nearly to the summits, a fine opportunity is presented for the study of the type forms. The whole volume of the river here runs, for about one and a half miles, through a narrow gorge in the basalt, averaging about one hundred metres in width, and but sixty metres wide at its narrowest part. During the summer freshet it is much increased in volume, overflows its inclosing walls, follows and overflows some inferior parallel gorges, and is thus greatly increased in width. The water rushes and foams through the main gorge with great velocity, having a fall, at the time of our survey, of about twenty feet to the mile. The strata exposed average about seventy feet in thickness, and incline toward the ocean about one hundred and forty feet in a mile. They were all



found to be distinct layers of basalt, except at a point on the southeast of the river, and seven hundred feet above the present level, where a deposit of lime is found, an interesting geological fact, historically."

When the Hudson's Bay Company was in its prime, there was no other authority in all the expanse of North America, from the waters of Hudson's Bay to those of Puget Sound, 4,000 miles apart. Communication between the far extremes was maintained by yearly journeys. In the high-water season the *voyageurs* of that company came sailing down the swollen stream, shooting the fearful rapids in their batteaux. Forty years ago American emigrants first essayed to make their way across the continent by land, and descended the river as they could. In the fall of 1843 the Applegate family arrived in Oregon. One of them tells of attempting the passage of the Dalles in a canoe, which was wrecked. He and another were saved, and a third was lost. His own experience was that he was sucked into a tremendous whirlpool, and rotated on its sides, looking up from the cylindrical depths to see the wrecked canoe whirling after him, and the stars shining clearly beyond. Some people do not find it convenient to believe all of this story; but those who know the narrator will recognize that it is very mildly told. It is true that Applegate was wrecked, taken into the whirlpool, and saved by stranding on a rock.

The weird aspect of nature at The Dalles, the black and rockbound shores, the river, in its always wild and sometimes fiercer moods, have no alleviation save the changing sky, that is almost always wreathed with smiles, and the lordly presence of Mount Hood, that wakes admiration. The beholder looks up from the sublimity of desolation around him, to see the same transformed into the ethereal and majestic, on a scale of grandeur that overawes while it impresses. Nature's moods are never trivial or wearisome on the Columbia. Below *the tortured waters* and the rock-ribbed shores that confine

them, the Columbia broadens beautifully, and becomes placid and inviting.

**Dalles City** (125 miles from Wallula, and 88 miles from Portland).—Dalles City is the eastern terminus of navigation on the middle river. Here are still to be seen the fine boats of the Oregon Railway & Navigation Company; for navigation is maintained on this route the whole year round. The traveler may either remain in the car at The Dalles, or step off the train upon a steamer, and, with the current's aid, go down the placid stream while the train is coursing along the steep and wooded shores. The Dalles is one of the oldest settlements east of the Cascades, and is of considerable note, occupying the very gateway between the eastern and western divisions of the country.

The word Dalles, signifying "swift waters," is applied as a general term to rapids on different points of the great river. The immigration of early times, as well as the *voyageurs* of the fur company, came to speak of The Dalles in general terms, and the word was finally applied to this locality as a specific designation. Missionaries tried in earliest times to establish a mission here, with limited success. A town sprang up as time developed the mines north and south, and agriculture and stock interests now support the thriving place. As the terminus of the Middle River Division, it received quite an income. It now lives on its actual surroundings, and will prosper more as development goes on. The town is built under a bluff, with farms and houses on the hill. The population is over 4,000. There are charming homes embowered among orchards and shade trees, several churches, good public schools, a fine academy and many industrial works, including the extensive shops of the railroad company. There are two newspapers, two large hotels, fine blocks of stores and pleasantly shaded streets.

From the city, but better still from salient points on the adjoining hills, Mount Hood is seen grandly. From above the

first bluff that terraces the heights behind the town, Mount Adams looks from beyond the Columbia, not equal to Hood, but still a mighty mountain.

The Dalles was even a noted place in the early days of settlement in this region. Here the emigrants, weary of the long march across the continent, and glad to avoid any further labor of road-making, leaving their empty wagons and tired teams to follow at leisure, themselves embarked with their effects upon rude boats to go down the Columbia to their destination at the Willamette settlements, over one hundred miles distant by the river. Reaching the Cascades, they made use of a portage six miles long at that unnavigable part of the great stream, resuming the boat journey beyond. This road around the Cascades is used to-day. There was not then, nor is there yet, a wagon road all the way down the Columbia, although an Indian trail at one time existed. In fact, there was no means of land communication between Dalles City and Portland until the railroad was opened, in the autumn of 1882.

**By Rail to Portland.**—From Dalles City westward the railroad follows the river's edge, and the scene changes from treeless, desert-looking shores to mountain views, that grow more interesting every mile. Soon after entering the mountains we find pines and firs scattered on the hillsides. Gradually forest growths increase. The mountains become at times densely wooded, and along the margin of the river maple, alder, ash and willow grow in tangled woods. The Columbia, from The Dalles to its exit from the mountains westward, has no valley. The mountains make the shores, leaving sometimes a fertile strip of bottom, and occasionally some bench land. About twenty miles below The Dalles, Hood river comes in from the south, and White Salmon from the north. Each has an arable valley near the Columbia. Save these two *limited districts*, there is no farming land worth notice for *seventy-five miles*. The track lies that distance through the great



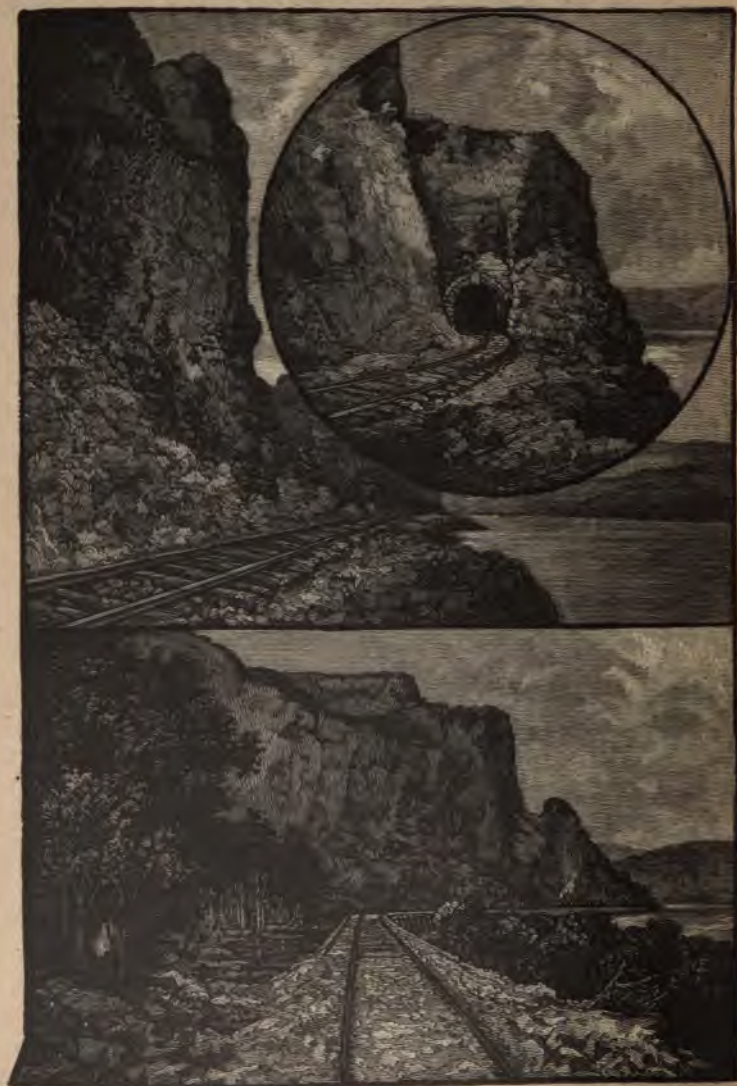
gorge the river has cut for its channel, working through a romantic region that has already become classic ground.

Hood river comes down from the snows of the great mountain, and has a charming valley, though not extensive. It has become attractive as a summer resort. Peaches thrive here, and many other fruits ripen to perfection. Hood river valley, and that of White Salmon, on the north side of the Columbia, both have repute for their fruit-growing, and attract those who go to the mountains for summer rest and recreation. Stages run from Hood River station to convey tourists to Mount Hood, during the summer months.

Midway of the mountains are the *Upper Cascades* (169 miles from Wallula). Above, the mountains are beautiful, and can be studied with careful attention. The placid river reflects the sky, and the heights are inverted with graphic effect in the limpid flow. Very beautiful views are caught as the road curves around projecting spurs of the ranges, by looking backward or forward across long watery reaches that have mountain and forest shores grouped in perfect beauty. Sometimes these views reach for many miles, to be shut off suddenly as the stream bends with the sweep of the mountains, when a new prospect is revealed. For placid beauty the upper river is supreme, although there are many really grand features of mountain scenery. Sometimes the forests climb to the summit. Sometimes they have been burned, and charred trunks stand against the sky. There have been fierce fires in these mountains, set by careless hunters, that have swept everything before them for many miles. Sometimes a pyramidal face of rock is seen, rising without tree or verdure of any kind, a mountain by itself. There is now and then a saw mill, or a chute from far in among the ranges, bringing down wood or lumber. There is scarce any other civilization visible.

**Along the Cliffs.**—Between The Dalles and Hood River there are two tunnels. The first is approached for half a mile





Along the Cliffs of the Columbia.

directly under the face of a towering cliff that forms one of the most interesting objects on the route. This rough precipice has been blown away at its base, to enable the track to be laid. A rip-rap wall protects the bank, and the precipice almost overhangs it, ranging from 450 to 600 feet in height. Standing on the car platform, and looking up at this mighty wall, the beholder receives an impression that is likely always to remain.

During the building of the road a great deal of hazardous work was done along such places as this, sometimes at the expense of workmen's lives. The only way to blow off the face of this tremendous cliff was to lower men to the point at which they were to work, with their tools, in rope slings. It was a risk that only men with the coolest nerve could undertake, and high pay was the inducement. Strength of muscle and power of will did not always save. The danger came by the loosening of rock above from friction of the rope. Fourteen men were killed by rocks falling on them in this way at different parts of the work. This road along the Columbia, of course, has easy grades, and so far compares favorably with the passage of the Central Pacific over the Sierra Nevada Mountains, in California. The same range runs north, thousands of miles, under the different names of the Andes, Cordilleras, Sierra Nevadas and Cascade Mountains. The Columbia, having cut a gorge for itself, makes a somewhat tortuous and very expensive road, the great cost of building which can be understood by journeying over it.

**Cascades and Mountains.**—Wooded ranges and abrupt cañons favor the existence of water-falls. Coming down from The Dalles by steamer, fine views are obtained of many famous falls or cascades on the Oregon side of the river. The railroad passes close to and almost under them, as they pour over the cliffs, sometimes so near that you are startled with the sound of plashing waters, and catch a glimpse of the foaming torrent as the train whirls by it.

The mountains become more abrupt as the "Heart of the Andes" is gained. Snow lingers upon them, and hollows on the north side of them are filled with it until late in the summer. The snowy peaks that sentinel the range wear their kingly robes always, but wear them more lightly through the summer solstice. There will come a rainy time, sometimes in September, that will rehabilitate the mountains, fill the deep furrows, and cover again the exposed ridges. After such a rain, Mount Hood is suddenly transformed into a thing of wondrous beauty and purity.

**The Sliding Mountain.**—The Indians have a tradition that once the great snow mountains, Hood and Adams, stood close to the river at the Cascades, with a natural arch of stone bridging one to the other. The mountains quarreled, threw out stones, ashes and fire, and, in their anger with each other, demolished the arch. Before that time, the Indians say, their fathers had passed up and down beneath the arch in their canoes, and the stream was navigable; but, when the arch fell, it choked the river, and created the rapids that now exist. The legend goes on to say that the "Sahullah Tyhee," or Great Spirit, was so angry with the contending mountains that He hurled them north and south, where they stand to-day.

This legend has some foundation, judging from the present conditions. It is evident, from the state of the shores and the submersion of forests, that some great convulsion has occurred and thrown down the rocky walls adjoining the river. Just above the Cascades the view includes beautiful islands, not far from the brink of the rapids; and between the islands and the rapids some ancient forest has been submerged, with the tree trunks still standing beneath the waves. It is commonly known to river men and steamboat men that this submerged forest stands there, and it is often pointed out to travelers. *How long* since it grew on the shore, no one knows. Indian





Multnomah Falls, Columbia River.



legends are never accurate, and we can only surmise that it was long centuries before the white man came.

In connection with this legend, there are scientific data to establish the fact that some great convulsion has taken place and blocked the stream. When the rock walls fell and choked the channel, the effect was to raise the waters and deaden the flow for eight miles above. The work of engineers who have built and superintended the railways constructed around the Cascades for twenty years back, has demonstrated that, for a distance of three miles on the south, a great spur of the mountains is moving toward the river. The engineers who made the examinations connected with the canal and locks that government is now constructing around the Cascades, have determined that the impending mountain of basalt rests on a bed of conglomerate, with a substratum of sandstone, pitching toward the river. As the river wears away under the basalt, the rock masses move toward it. It is very possible that at some remote period, when the river had worn out a gorge, and precipices lined the shore, the waters undermined this wall and aided its descent on the incline of sandstone and conglomerate, so as to produce the effect which is seen, and confined to a short distance the fall that previously covered fifteen miles.

Mr. Theilson, when chief engineer of the Northern Pacific Western Divisions, asserted, a few years ago, that, when they were repairing the narrow-gauge road, originally used for portage purposes, it was found that the track twisted out of line by the movement of the mountain. In one place it had moved seven or eight feet, and in other places ten. There was no mistaking the fact that there had been in two years a general movement of the whole mountain-side for a distance of three miles. This testimony is conclusive, and it is very likely that the Indian tradition has its foundation in this fact. At the *Upper Cascades* the road goes close to the work carried on by the *United States Government* of constructing a canal and locks

around the rapids. This will require an outlay of millions, and it is done in the most substantial manner. It remains to be seen how the moving mountain will affect it.

**The Cascades.**—The Cascades are in about the centre of the mountain range. The river, that has flown so placidly all the way from The Dalles, has become wider, and spreads out in unbroken stillness, no motion being apparent. It is gathering itself for the plunge over the Cascades. In a moment it changes from a placid lake to swift rapids, and soon becomes a foaming torrent as the fall increases and the waters encounter boulders in the stream.

Immediately at the Cascades the scenery is very fine. The mountains are grand, standing on the south like walls of adamant, and lifted to towering heights, their sides cleft open at intervals by deep ravines, the rock ledges of which are hidden by firs. Some of the rocky pinnacles and turrets along the heights are of strange, stern architecture.

On the north the mountains recede, and pyramidal forms contrast with tremendous frowning outlines, that stand like some Titanic fortress. There is a fine view of the Cascades from the train, and of the mountains on the north. At railroad speed the Lower Cascades are soon passed, and *Bonneville*, the point at which the steamboats on the lower river make their landing, is reached.

**The Old Block House.**—Near the Upper Cascades, on the Washington side of the river, on a point of land that juts out so as to make a good defensive position, there is still standing an old block house, built thirty years ago, when the Indians were more numerous than peaceable. War broke out all along the coast, from British Columbia to California, in 1855. The Indians had some sort of unison, and outbreaks were almost simultaneous for that distance of 800 miles, though some of the more powerful tribes refused to join the alliance, and gave notice of danger. At that time the Cascades were already important



Cascades of the Columbia River.

as the portage where all things bound up the river had to make a transit. Suddenly the outbreak came. The block house became the refuge of all the settlers, who were defended by the male population, and by a handful of soldiers, stationed there at the time under command of a young Lieutenant named Sheridan. So the legend of the Indian and the wonders of nature are supplemented by a bit of history that has for its heroic character the now famous Gen. Phil. Sheridan, who was a favorite in the country thirty years ago.

A little way below the Cascades, on the south side, there is a canning establishment. Travelers feel much curiosity concerning great wheels that float on the tide and revolve with the current. These are a cruel invention for taking fish. As they get into the rapids, the salmon swim near the shore, and these wheels are placed in their way, and take them bodily up without regard to size, landing them in great tanks for the use of the cannery. The quantity of fish sometimes taken in a few hours' good run is enormous.

**Wonderful Scenery.**—Soon after leaving Bonneville, a stretch of the grandest scenery of the grand river is entered. On the south, mountain summits stand like a wall, grouped at times like an amphitheatre, at other times assuming romantic shapes, and frequently affording views of falling waters that are very beautiful. Here is *Oneonta Fall*, 800 feet of sheet silver, a ribbon of mist waving in the wind. *Multnomah Fall* is double. The water plunges several hundred feet, gathers itself together, and plunges again, about 800 feet in all. There are several other cascades of less note that never fail, and in early spring the face of the cliffs is threaded with them. A few miles westward are the *Pillars of Hercules*, two columns of rock several hundred feet in height, between which the train passes, as through a colossal portal, to the more open lands beyond. Near by is *Rooster Rock*, rising out of the river, and pointing upward like a mighty index finger.





Pillars of Hercules and Rooster Rock, on the Columbia River.

On the north side, a few miles below Lower Cascades, is *Castle Rock*, which rises by itself, no mountain adjoining, a thousand feet high. Castle Rock is a favorite view, and is well worthy of its reputation. Below, on the north side, is *Cape Horn*, a precipice over two hundred feet high, that rises abruptly from the water. This is another view that is much admired.

Every moment the tourist sees something to interest and attract. Attention is demanded in every direction, as new objects unfold. There are terraced heights, abrupt cliffs, crags in curious shapes, and mountain upon mountain to chain the eye. The unceasing panorama, with all its wonderful variety, is almost wearying, and a sense of relief is likely to be felt when the shores grow lower and the stream expands. Here the regions of western Oregon and Washington are reached. Islands are in the river, grassed heavily, and pastured by cattle. The shores, and the bluffs back of them, reveal homes and orchards. At last, the Columbia has a valley, though not an extensive one.

Soon after leaving the mountain gorge, the track diverges from the river, and, passing through a forest region for about twenty miles, comes to East Portland, and then to Portland itself.



## BY RIVER TO PORTLAND.

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DISTANCE, 110 MILES.

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Arriving at The Dalles, the traveler has the choice, as we have already said, of remaining on the train, or of proceeding to Portland by steamboat, the distance by water being 110 miles, as against eighty-eight by rail. The river fleet of the Oregon Railway & Navigation Company is composed of first-class, speedy and commodious steamers, which are in every respect luxuriously equipped for the passenger service. The trip down the Columbia river is thoroughly enjoyable. From the deck of a steamer there is, of course, a far better opportunity to observe in detail the diversified beauties of the river than from the train. The scenery may be observed on both sides, and all the turns and changes of the stream are noticed.

At the Upper Cascades the steamer discharges her passengers, on the Washington side of the river, and here a short portage of six miles by railroad is made before re-embarking on another steamer to pursue the journey to Portland.

The voyage onward, for a couple of hours, is upon the most romantic portion of the river. Castle Rock lies on the right hand, and on both sides, especially on the left shore, are to be seen foaming cascades pouring down the rugged faces of the mountains. Then comes Cape Horn, after which the river *widens* and the shores gradually become lower, with long,

wooded islands in mid-stream, where dairy farming is carried on quite profitably.

Presently the city of *Vancouver*, W. T., is reached, and here the boat stops to take in fuel. The site of Vancouver is beautiful, and the place shows finely from the river. The east half of the city is devoted to the military; for this is the headquarters of the Department of the Columbia. The storehouses, officers' quarters and barracks make an imposing appearance. The shores on either side of the river, above and below Vancouver, are well cultivated and very attractive. From this point, looking west and south, Mount Hood (11,025 feet) is seen in perfect majesty. Twelve miles below, the steamer turns from the Columbia into the Willamette; and, looking north, other great mountains of Washington Territory loom up. St. Helens (9,750 feet) is sixty miles away, a vast white pyramid; Mount Adams (9,570 feet), seventy-five miles off, is partly hidden by the ranges; Mount Tacoma (14,360 feet), one hundred miles distant, on Puget Sound, or near it, is too remote to convey the correct impression of its grandeur, but can be plainly seen. There is one place, three miles up the Willamette, where five snow mountains can be seen at once on a clear day,—St. Helen's, Tacoma, Adams, Hood and Jefferson, the last looking over the ranges for a long distance to the south. The panorama is magnificent, changing and opening at intervals as the steamer follows her course. Looking back, down the Willamette, a perfect picture is revealed where St. Helen's pyramid of white is framed in by the Willamette shores.

Approaching Portland by river, the traveler soon becomes aware that he is nearing a commercial city. River craft of all sorts and sizes, as well as ocean vessels, are found at the wharves of the city itself, one hundred and twenty-five miles from the ocean, representing the commerce of the world. East Indiamen, that have abandoned their former trade to steamers





Castle Rock, on the Columbia River.

and the Suez Canal; ocean steamers, from the magnificent 3,000-ton passenger and freight steamships of the Oregon Railway & Navigation Company, to the business-looking colliers from Puget Sound, and the steam schooner that trades along the coast,—these, and all sorts of river and coasting craft, are at Portland wharves. At the sight of them, the fact is at once recognized that the journey across the continent is ended, and that the metropolis of the Pacific Northwest has been reached.

**Portland** (213 miles from Wallula; population, 35,000) is the commercial metropolis and railroad centre of the Pacific Northwest. It is a beautiful city, well built in both its business and residence districts, and standing upon a gentle slope stretching from the bank of the Willamette river westward, for a distance of about two miles, to a range of steep, wooded hills. The city extends for about the same distance up and down the river. Its residence streets are shaded with maples and ash, elms, horse-chestnuts and other shade trees, and most of the houses front upon lawns and flower gardens. Indeed, Portland is a city of flowers and foliage, the mildness of the climate and moisture of the atmosphere causing vegetation to flourish. The winter climate is so mild that roses usually bloom until the first of January.

The situation of Portland was determined by the fact that the Willamette valley was the first settled portion of Oregon, and the commercial city of the State naturally sprang up at the point nearest to the wheat fields of the Willamette valley to which sea-going ships could get access. This point was not on the Columbia river, but as far up the Willamette as vessels of deep draught could go. With the construction of the railway system of Oregon and Washington, Portland's business supremacy was reaffirmed. Two lines of standard-gauge road terminating here penetrate the Willamette valley, draining the country on both sides of the Willamette. One of these lines



Cape Horn, on the Columbia River.

extends southward to the California boundary. A system of narrow-gauge railroad devised to furnish transportation facilities to portions of the valley not reached by the other roads, also terminates in Portland. The main line of the Oregon Railway & Navigation Company extends eastward to a junction with the Northern Pacific at Wallula, and by means of numerous branches reaches nearly all the productive country of eastern Oregon, and a large part of eastern Washington. Westward from Portland the Northern Pacific main line reaches down the Columbia forty miles, and thence northward to Puget Sound. Ocean steamships ply regularly between Portland and San Francisco, and river steamboats run on the Columbia and Willamette. Portland is thus the focus of the entire transportation system of the Pacific Northwest. It is also an important port for ocean commerce, and a large part of the wheat surplus of Oregon and Washington goes from the wharves of Portland by sailing vessels to Liverpool and other European ports.

Portland has many handsome business blocks which would be creditable to any city in the East. It exported about eight million bushels of wheat in 1885, and over 500,000 barrels of flour; the grain fleet of that year sailing from Portland numbered 113 vessels. Portland has a good street-car system, water, gas and electric light works, a public library, four daily newspapers, great wharves and warehouses, numerous handsome churches, and many spacious public school edifices, the largest of which, the high-school building, is the handsomest public school structure on the Pacific coast.

Immediately opposite the city, on the eastern bank of the Willamette, is the populous suburb of *East Portland*, with 3,000 inhabitants, and *Albina*, with 1,000 inhabitants. The latter place has the largest wheat warehouse on the Pacific coast, and is also the location of extensive railway shops.





Glaciers of Mount Tacoma.

## PACIFIC DIVISION.

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PORTLAND TO TACOMA.—DISTANCE, 145 MILES.

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The Pacific Division of the Northern Pacific Railroad, from Kalama, on the Columbia river, to Tacoma, on Puget Sound, was built in 1872 and 1873, and was put in operation in 1874. Until 1884, the distance of thirty-eight miles between Kalama and Portland by river was covered by means of the steamboats of the Oregon Railway & Navigation Company. In that year the link from Portland to a point on the Columbia river opposite Kalama was completed. The transfer of trains is effected by means of a large transfer steamboat, called the "Tacoma," which has three tracks on its deck, and ferries over the longest trains at one passage.

The road from Portland follows for about eight miles the west shore of the Willamette river, and reaches the head of Sauvie's Island. Thence it continues down the west arm of the river to the point at which the stream empties into the Columbia at St. Helen's. Sauvie's Island is nearly twenty miles in length. It is a rich piece of land in the delta, formed by the junction of the rivers.

There are no towns of importance between Portland and the crossing of the Columbia. The station on the south bank of the river, which is the landing place of the transfer steamboat, is called *Columbia City*.

**Kalama** (40 miles from Portland), on the north bank of the river, is the county seat of Cowlitz county, and has 200 inhabitants, an hotel, two stores, two churches, and a court house. At one time this place had the ambition to become the commercial metropolis of the Columbia valley, and town lots were sold in the forests at high prices.

Leaving Kalama, the track follows down the Columbia a few miles, then turns up the valley of the Cowlitz river, and strikes across the country for Puget Sound.

In the Cowlitz valley are rich bottom lands that were taken by settlers at a very early day. These farms are famous for producing hay and dairy products. For 105 miles, from Kalama to Tacoma, the route is through a wooded region that is, for the most part, sparsely populated. The soil of all this area is fertile; but the thick forests are likely to deter settlement to a large extent, until the vast expanses of open and productive country east of the Cascade Mountains are fully occupied and brought under cultivation.

The stations passed on the way are *Carroll's*, *Monticello*, *Cowlitz*, *Olequa* and *Winlock*, distant, respectively, 45, 48, 51, 68 and 77 miles from Portland.

Passing out of the Cowlitz valley, the road reaches the Chehalis river. This stream runs in a northwest direction, and empties into the ocean at Gray's Harbor. Its valley, varying in breadth from fifteen to fifty miles, is the largest and most valuable agricultural region in western Washington.

**Chehalis** (90 miles from Portland; population, 750).—This is a thriving town, supported by the fine agricultural country of the Chehalis valley. It is the county seat of Lewis county, and has two hotels, a newspaper, three churches and a number of mercantile establishments. A railroad is projected to the mouth of the Chehalis at Gray's Harbor.

**Centralia** (94 miles from Portland; population, 400) is an *active trading town*, doing business with the farmers in the



Glaciers of Mount Tacoma.  
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Chehalis country. The neighboring valley lands produce large crops of all the small grains, Indian corn and potatoes. Apples, plums and pears, and the smaller fruits, flourish.

A fine view of Mount Adams, away to the eastward, on the further side of the Cascade range, is to be obtained at several points, as the train goes northward. It is seen across the wooded valley of the Nisqually, its white mass in bold relief against the sky, its sides seamed in summer with outcropping rock ridges, the hollows between being filled with never-melting snows.

**Tenino** (106 miles from Portland).—The Olympia & Chehalis Valley Railroad, a narrow-gauge line, fifteen miles long, owned by an independent corporation, connects *Olympia*, the capital of Washington Territory, and the county seat of Thurston county, with the track of the Northern Pacific Railroad at Tenino. The road passes through a dense forest, touching the stations *Gillmore*, *Spurlock*, *Plum*, *Bush Prairie* and *Tumwater*, the latter a lively manufacturing village, with fine water-power, on the outskirts of Olympia.

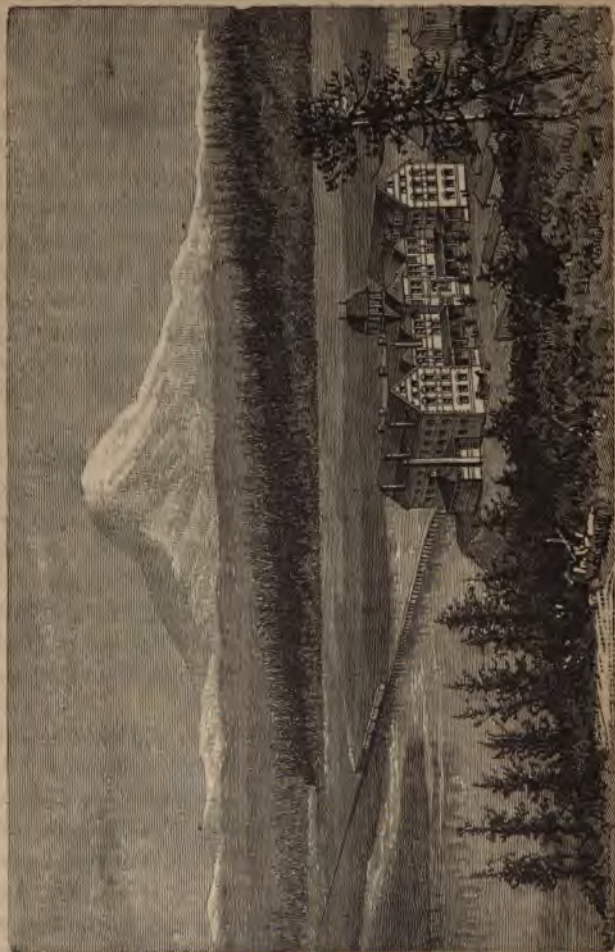
**Olympia** (122 miles from Portland; population, 2,000) is the capital of Washington Territory, and is the oldest town in the Territory west of the Cascade Mountains. It is beautifully situated at the head of the crescent-shaped body of water which was originally named Puget Sound by an English explorer named Vancouver. The name is now generally applied to the whole body of water from the Straits of San Juan de Fuca to Olympia. Vancouver called the main body Admiralty Inlet, and gave separate names to the smaller inlets, bays and channels. Olympia is an attractive place, with broad and well-shaded streets, and an abundance of fruit trees and flowers. It has five churches, a good public school, two newspapers, a bank, and several hotels. Steamboats run daily to Tacoma and Seattle. There is also steamboat connection with the saw mill towns and lumbering camps on Hood's

Canal. Thurston county, of which Olympia is the county seat, is densely wooded, and lumbering is a leading industry. There is a great extent of prairie and bottom land in the county, adapted to stock-raising and mixed farming.

**The Northern Pacific Railroad** deflects eastward after leaving Tenino, and at *Yelm Prairie*, fourteen miles beyond, there is a revelation of unsurpassed grandeur, provided the sky be cloudless, in the view of Mount Tacoma, the loftiest of all the snow mountains. As the train rushes onward, occasional breaks in the forest allow the sight of this snow-clad peak to a great advantage. It is about forty miles distant, although its vast bulk is so distinct that it seems much nearer than that. The road comes out of the forest on the gravelly plains of the Nisqually, and for twenty-five miles passes over this stretch of valley land until it stops at Tacoma.

At *Lake View* (96 miles from Kalama), in the Nisqually valley, the last station before Tacoma is reached, there is a group of beautiful lakes, surrounded by pine groves and stocked with fish. Some gentlemen have chosen this spot for a summer resort, and built cottages around Gravelly Lake, one of the most attractive of the cluster. This is considered one of the pleasantest summering places on the north coast. There are fine drives over the level prairie, and the ever-changing views of Mount Tacoma are magnificent.

**Tacoma** (145 miles from Portland; population, 6,000) was the first point touched by the Northern Pacific Railroad on the waters of the Pacific Ocean. It occupies a commanding position, and has an excellent harbor, capable of receiving the largest ocean-going vessels, which are loaded at the wharves with coal, lumber and other productions of the region. Commencement Bay, on the east, opens upon the fertile valley of the Puyallup; and beyond, in the near distance, rises the grand form of snow-covered Mount Tacoma. The railroad reaches the shores of Commencement Bay, under a steep bluff, the sum-



"The Tacoma," Tacoma, Washington Territory.

mit of which is crowned with pleasant residences. Views from the bluff are superb, including the Olympic Mountains, on the peninsula between the sound and the ocean; the full sweep of the waters of the inlets near by, the wide expanse of Commencement Bay, and the grand mountain scenery beyond. Tacoma is an important business point and a very attractive resort for tourists. It has the largest and best-equipped hotel on the Pacific Coast north of San Francisco, "The Tacoma," which stands on a high plateau overlooking Commencement Bay, and in full view of the enormous snow peak of Mount Tacoma. There are in the town nine other hotels, eight churches, a handsome public school building, and an Episcopal seminary for girls, called the "Anna Wright" Seminary, in honor of the deceased daughter of Charles B. Wright, of Philadelphia, ex-President of the Northern Pacific Railroad, who has liberally endowed the institution. The Episcopal Church is a beautiful stone structure, erected by Mr. Wright as a monument to the memory of his wife. Tacoma is the headquarters of the Western Divisions of the Northern Pacific Railroad, and has extensive car and repair shops. Pacific Avenue, the principal business street, is a broad thoroughfare, with many substantial brick business blocks, and considerable wholesale trade is done here. The town has water-works and gas works, is well drained, and is remarkably healthy. The Cascade Branch of the Northern Pacific Railroad, which terminates here, brings in considerable trade from the hop-growing valleys of the Puyallup, the Stuck and the White rivers, and from the coal mines at the base of the mountains. When completed across the mountains in 1887, it will make Tacoma a great wheat shipping port, and also an important entrepot for foreign trade. There are daily steamboats to Seattle, Port Townsend, Victoria, Olympia, and other places on the sound. There is also regular weekly connection with San Francisco by large ocean steamships. Tacoma has one of the largest saw mills on the sound, and ships



lumber to China and Australia, and to the Mexican and South American ports. The coal wharves and bunkers are enormous constructions, built out into the bay, upon which the coal trains run, dumping their cargoes into huge bins, from whence they are transferred by force of gravity to the holds of steamers and sailing vessels. Parties are formed in Tacoma during the excursion season for the ascent of Mount Tacoma ; guides and outfits can be engaged in the town. An ascent 11,000 feet above the sea can be made without danger or serious fatigue.



## THE SEATTLE BRANCH.

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PUYALLUP TO SEATTLE.—DISTANCE, 32 MILES.

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This branch, built in the summer of 1883 to connect Seattle with the Northern Pacific system, leaves the Cascade Division at Puyallup, ten miles from Tacoma, and runs in a northerly direction through the valleys of the Stuck and White rivers to Seattle, traversing a highly productive agricultural region largely engaged in the raising of hops. Several small towns are located on the line.

**Seattle** (41 miles from Tacoma, and 2,098 miles from St. Paul via the Cascade Division; population, 10,000).—This is the largest city on Puget Sound, and is charmingly situated on a succession of high terraces which rise from the shores of Elliot Bay. The city is laid out for a distance of three miles from the bay to the shores of Lake Washington, a fine body of fresh water, twenty miles long, by about three miles wide. A similar lake, called Lake Union, connects with Lake Washington, and also with the sound, and the suburbs of the city in a northeastern direction advance to its shores. Seattle is the centre of a remarkably complete system of steam navigation, which embraces all the towns and lumbering camps on the sound, and also the navigable rivers of the region. A fleet of twenty-five steamboats is engaged in the local trade of the



Distant View of Mount Tacoma.

sound, running to Tacoma, Olympia, Hood's Canal, Port Townsend, La Conner, Whatcom, and many minor points, and also up the White, Snohomish, Skagit, and Snoqualmie rivers. Ocean steamers run regularly to San Francisco. Steamboats of large size run to Victoria, B. C. Seattle has fifteen churches; sixteen hotels, four of which are of large size and well appointed; three daily newspapers; four national and two private banks; and an opera house, with a seating capacity of 1,200. Educational facilities are provided by the Territorial University; by the public schools, which occupy large and costly buildings; the Yesler College, an institution for boys; an academy for young ladies; a business college; and several private and denominational schools. There are sixty-three manufacturing concerns in the city, most of which are engaged in industries connected with the lumber trade. A street railroad connects the principal wharves with the north-eastern suburbs of the city. The neighboring coal fields are one of the chief elements which contribute to the prosperity of Seattle. The mines now worked are chiefly in the vicinity of Renton and Newcastle, and are reached by a narrow-gauge railroad, twenty miles long. There are extensive coal fields, which have been explored, and are being developed, lying on the Green and Cedar rivers, near the base of the Cascade Mountains. Coal is brought to the wharves in Seattle, and shipped by a line of steam colliers to San Francisco. Both the mining and shipping operations, as well as narrow-gauge railroad, are in the hands of the Oregon Improvement Company. There is considerable agricultural land tributary to Seattle in the valleys of White, Green and Snoqualmie rivers.

**Other Towns on Puget Sound.**—Besides Tacoma, Olympia and Seattle, which have been described in the preceding pages, the important towns on Puget Sound are *Port Townsend*, *La Conner* and *Whatcom*. *Port Townsend* is some-





times called the "Gate City of the Sound." It is situated at the entrance of Admiralty Inlet, on the Strait of Juan de Fuca, and is the port of entry for the entire Sound district. It has about 2,500 inhabitants, and its principal trade is in supplying the ships which enter and clear at its custom house. An iron furnace in the vicinity manufactures pig iron from hematite ore. There is a military post about three miles distant. The harbor of Port Townsend is an excellent one, being well sheltered from the north and west winds. *La Conner*, on the eastern shore of the sound, is a lumbering town with considerable agricultural country tributary to it. *Whatcom*, on the Lower Sound, is the last town before the British line is reached. It has a population of about 500, with considerable agricultural country tributary to it, and with large undeveloped fields of deposits of coal and iron. This is the first point on the sound where coal was mined; but the development of the fields back of Seattle and Tacoma has caused the industry to be unprofitable. A railroad is projected from Whatcom to a connection with the Canadian Pacific line.

**Victoria** (117 miles from Tacoma) has a population of about 10,000, and is the seat of government for the Province of British Columbia. It is situated on the southern extremity of Vancouver's Island, on a small, landlocked bay which puts in from the waters of the broad Strait of Juan de Fuca. Esquimault Bay, five miles distant, is a station for the British navy, and has a large and extensive dry dock, constructed by the British Government. The climate of Victoria is mild in winter, and cold in summer, and the place is a favorite resort for tourists. Excellent roads lead into the country in every direction, and the scenery, especially along the shores of the strait, from whence the lofty and rugged range of the Olympian Mountains is seen, is strikingly picturesque. Steamers leaving Tacoma in the evening arrive at Victoria

the next morning. From Victoria, there is steamship connection with San Francisco, and also with Sitka, Alaska, and steamboats run across the Gulf of Georgia to points on the mainland and on the Fraser river.













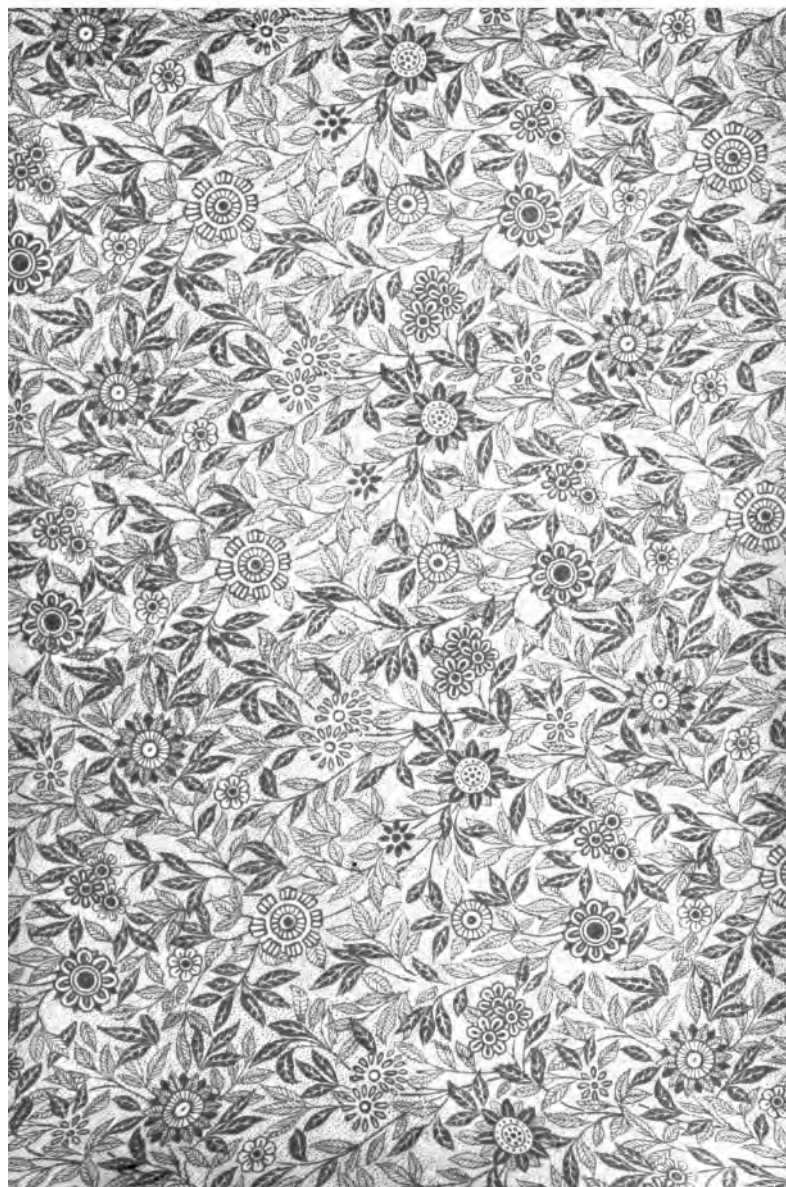
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